

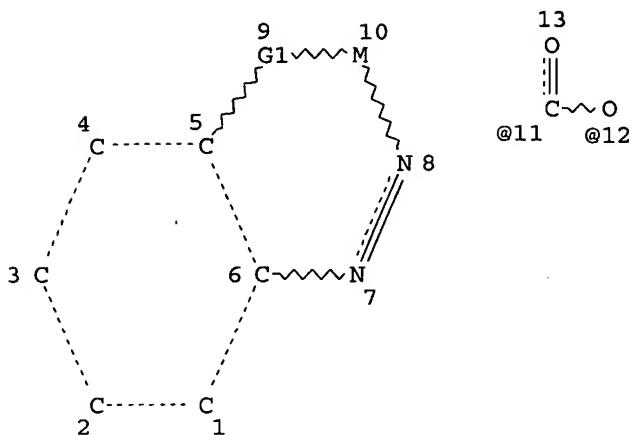
10-768-291

44

Nwaponicha 107768, 291

07/27/2005

=> d que stat 18  
L6 STR



VAR G1=O/S/SE/P/N/11/12

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

MLEVEL IS CLASS AT 7 8 10

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE

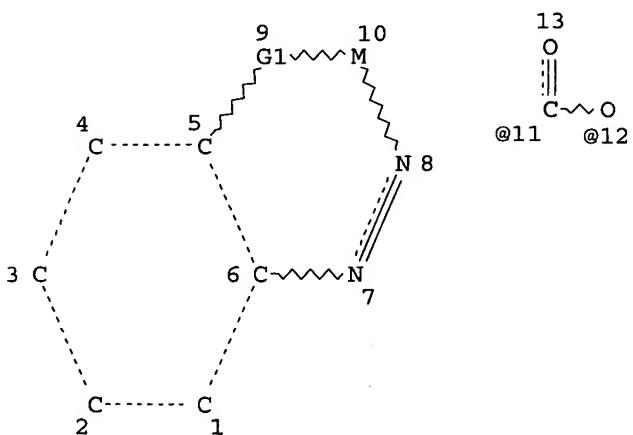
L8 19568 SEA FILE=REGISTRY SSS FUL L6

100.0% PROCESSED 136021 ITERATIONS

19568 ANSWERS

SEARCH TIME: 00.00.01

=> d que stat 116  
L6 STR



VAR G1=O/S/SE/P/N/11/12

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

MLEVEL IS CLASS AT 7 8 10

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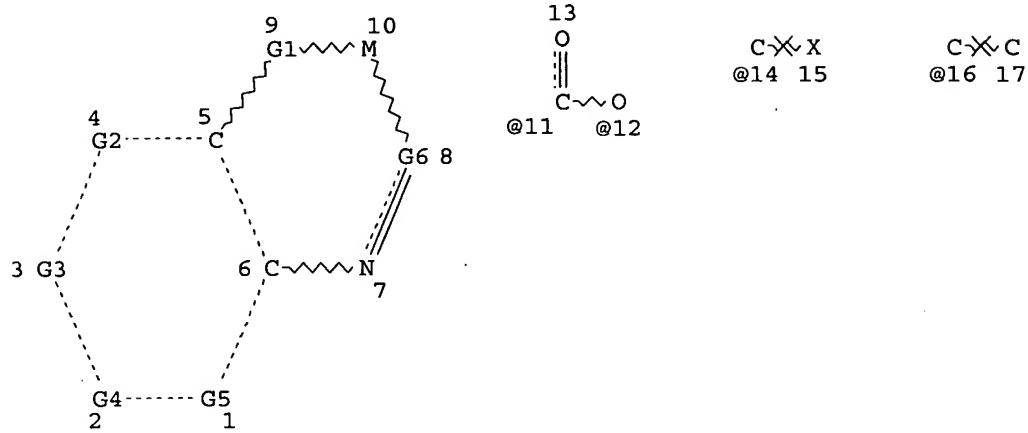
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE

L8 19568 SEA FILE=REGISTRY SSS FUL L6  
L14 STR



N-X-X-N  
@18 19 @20 21

VAR G1=O/S/SE/P/N/11/12

VAR G2=CH/14/16

VAR G3=CH/14/16

VAR G4=CH/14/16

VAR G5=CH/14/16

VAR G6=NH/18/20

NODE ATTRIBUTES:

NSPEC IS RC AT 15

NSPEC IS RC AT 17

NSPEC IS RC AT 19

NSPEC IS RC AT 21

DEFAULT MLEVEL IS ATOM

MLEVEL IS CLASS AT 7 10

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 21

STEREO ATTRIBUTES: NONE

L16 7180 SEA FILE=REGISTRY SUB=L8 SSS FUL L14

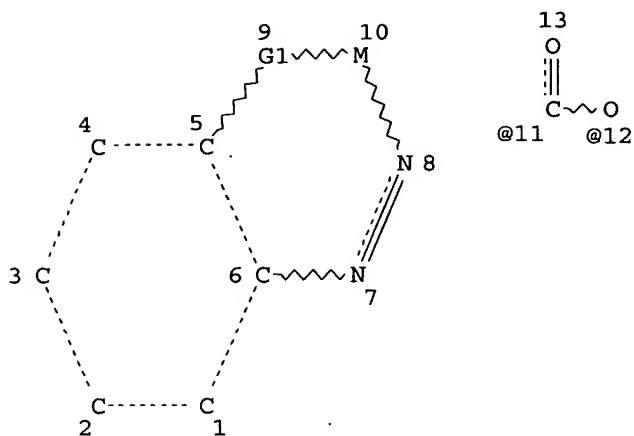
100.0% PROCESSED 19568 ITERATIONS

7180 ANSWERS

SEARCH TIME: 00.00.01

=> d que 143  
L6 STR

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VAR G1=O/S/SE/P/N/11/12

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

MLEVEL IS CLASS AT 7 8 10

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 13

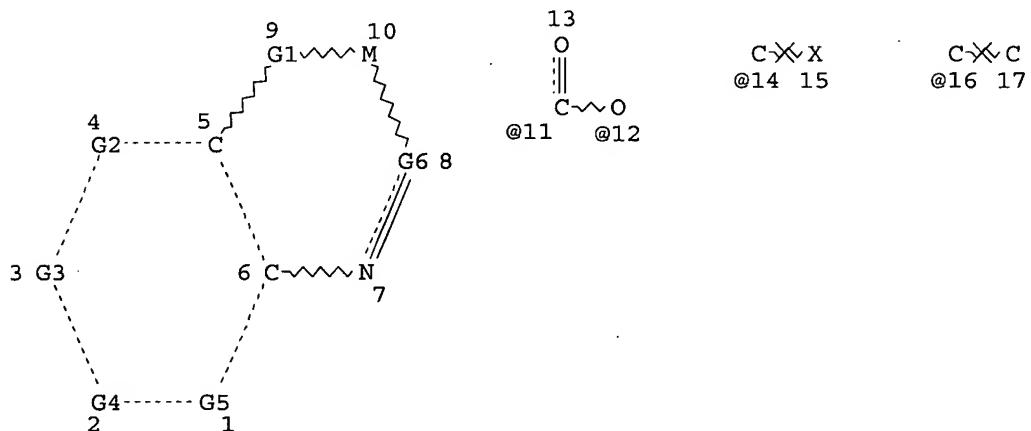
STEREO ATTRIBUTES: NONE

L8 19568 SEA FILE=REGISTRY SSS FUL L6

L10 18911 SEA FILE=REGISTRY ABB=ON PLU=ON L8 AND (B4 OR B5 OR B6 OR B7  
OR B8 OR B1 OR B2)/PG

L11 4906 SEA FILE=REGISTRY ABB=ON PLU=ON L8 AND B8/PG

L14 STR



N->X  
@18 19

N->C  
@20 21

VAR G1=O/S/SE/P/N/11/12

VAR G2=CH/14/16

VAR G3=CH/14/16

VAR G4=CH/14/16

VAR G5=CH/14/16

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VAR G6=NH/18/20

NODE ATTRIBUTES:

NSPEC IS RC AT 15  
 NSPEC IS RC AT 17  
 NSPEC IS RC AT 19  
 NSPEC IS RC AT 21  
 DEFAULT MLEVEL IS ATOM  
 MLEVEL IS CLASS AT 7 10  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 21

STEREO ATTRIBUTES: NONE

L16 7180 SEA FILE=REGISTRY SUB=L8 SSS FUL L14  
 L17 2217 SEA FILE=REGISTRY ABB=ON PLU=ON L16 AND L11  
 L20 628 SEA FILE=HCAPLUS ABB=ON PLU=ON L17  
 L21 6 SEA FILE=HCAPLUS ABB=ON PLU=ON L17 (L) CAT/RL  
 L22 11 SEA FILE=HCAPLUS ABB=ON PLU=ON L17 (L) ?CATALY?  
 L23 26 SEA FILE=HCAPLUS ABB=ON PLU=ON L17 (L) ?POLYMER?  
 L24 35 SEA FILE=HCAPLUS ABB=ON PLU=ON (L21 OR L22 OR L23)  
 L25 10 SEA FILE=HCAPLUS ABB=ON PLU=ON L20 AND (POLYMER?)/SC,SX  
 L26 41 SEA FILE=HCAPLUS ABB=ON PLU=ON (L24 OR L25)  
 L27 6858 SEA FILE=REGISTRY ABB=ON PLU=ON L16 AND L10  
 L28 4641 SEA FILE=REGISTRY ABB=ON PLU=ON L27 NOT L17  
 L30 7 SEA FILE=HCAPLUS ABB=ON PLU=ON L28 (L) CAT/RL  
 L31 70 SEA FILE=HCAPLUS ABB=ON PLU=ON L28 (L) ?POLYMER?  
 L32 10 SEA FILE=HCAPLUS ABB=ON PLU=ON L28 (L) ?CATALY?  
 L33 78 SEA FILE=HCAPLUS ABB=ON PLU=ON (L30 OR L31 OR L32)  
 L34 71 SEA FILE=HCAPLUS ABB=ON PLU=ON L33 NOT L26  
 L35 26 SEA FILE=HCAPLUS ABB=ON PLU=ON L34 AND POLYMER?/SC,SX  
 L36 67 SEA FILE=HCAPLUS ABB=ON PLU=ON L35 OR L26  
 L41 59 SEA FILE=HCAPLUS ABB=ON PLU=ON L36 AND ?POLYMER?  
 L42 10 SEA FILE=HCAPLUS ABB=ON PLU=ON L41 AND ?CATALY?  
 L43 59 SEA FILE=HCAPLUS ABB=ON PLU=ON (L41 OR L42)

=&gt; d his l48

(FILE 'USPATFULL, USPAT2, CAOLD, TOXCENTER, CASREACT' ENTERED AT 13:57:12  
 ON 27 JUL 2005)

L48 26 S L46 AND L47

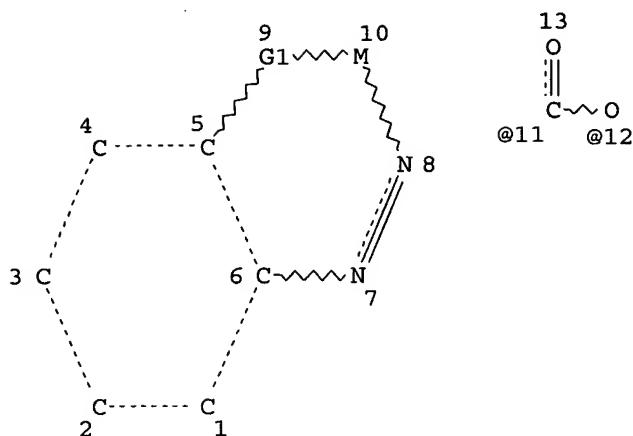
=&gt; d que nos 148

L6 STR  
 L8 19568 SEA FILE=REGISTRY SSS FUL L6  
 L11 4906 SEA FILE=REGISTRY ABB=ON PLU=ON L8 AND B8/PG  
 L14 STR  
 L16 7180 SEA FILE=REGISTRY SUB=L8 SSS FUL L14  
 L17 2217 SEA FILE=REGISTRY ABB=ON PLU=ON L16 AND L11  
 L44 201 SEA L17  
 L45 188 DUP REM L44 (13 DUPLICATES REMOVED)  
 L46 32 SEA L45 AND ?CATALY?/BI,IT,ST,CC,CT  
 L47 81 SEA L45 AND ?POLYMER?/BI,IT,ST,CC,CT  
 L48 26 SEA L46 AND L47

=&gt; d que 153

L6 STR

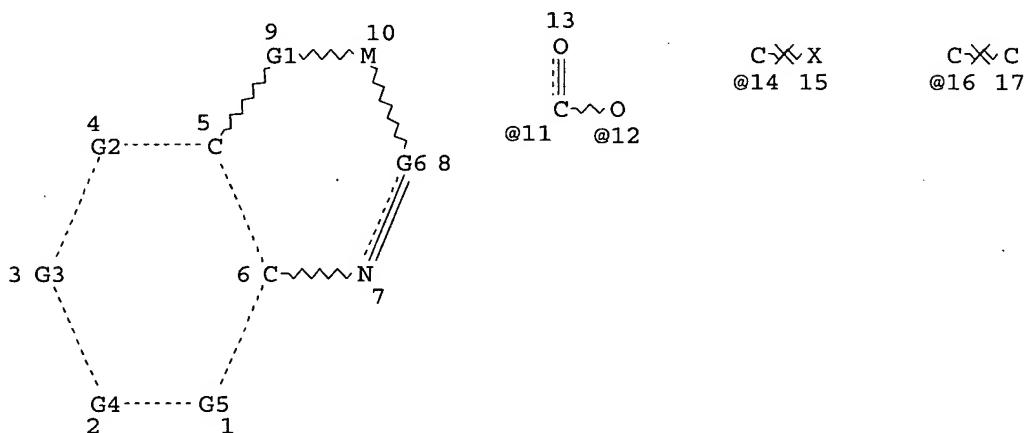
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```
VAR G1=O/S/SE/P/N/11/12
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
MLEVEL IS CLASS AT    7  8 10
DEFAULT ECLEVEL IS LIMITED
```

GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE  
L8 19568 SEA FILE=REGISTRY SSS FUL L6  
L11 4906 SEA FILE=REGISTRY ABB=ON PLU=ON L8 AND B8/PG  
L14 STR



N-X X N-X C  
@18 19 @20 21

```
VAR G1=O/S/SE/P/N/11/12  
VAR G2=CH/14/16  
VAR G3=CH/14/16  
VAR G4=CH/14/16  
VAR G5=CH/14/16  
VAR G6=NH/18/20  
NODE ATTRIBUTES:
```

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NSPEC IS RC AT 15  
 NSPEC IS RC AT 17  
 NSPEC IS RC AT 19  
 NSPEC IS RC AT 21  
 DEFAULT MLEVEL IS ATOM  
 MLEVEL IS CLASS AT 7 10  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 21

STEREO ATTRIBUTES: NONE

L16	7180 SEA FILE=REGISTRY SUB=L8 SSS FUL L14
L17	2217 SEA FILE=REGISTRY ABB=ON PLU=ON L16 AND L11
L49	0 SEA FILE=REGISTRY ABB=ON PLU=ON L17 AND MEDLINE/LC
L50	0 SEA FILE=REGISTRY ABB=ON PLU=ON L17 AND BIOSIS/LC
L51	0 SEA FILE=REGISTRY ABB=ON PLU=ON L17 AND EMBASE/LC
L52	0 SEA FILE=REGISTRY ABB=ON PLU=ON L17 AND CANCERLIT/LC
L53	0 SEA FILE=REGISTRY ABB=ON PLU=ON (L49 OR L50 OR L51 OR L52)

=> d his 160

(FILE 'PASCAL, JICST-EPLUS, SCISEARCH, APOLLIT' ENTERED AT 14:09:19 ON 27  
 JUL 2005)  
 L60 10 DUP REM L59 (6 DUPLICATES REMOVED)

=> d que 160

L54	QUE ABB=ON PLU=ON NICKEL OR NI OR PALLADIUM OR PD OR P LATINUM OR PT
L55	148 SEA L54 (5A) AZO
L56	43 SEA ((TRANSITION OR (D(1W) BLOCK)) (2A) (METAL OR ELEMENT)) (5A) AZO
L57	9 SEA (L55 OR L56) (10A) ?CATALY?
L58	7 SEA (L55 OR L56) (10A) ?POLYMER?
L59	16 SEA (L57 OR L58)
L60	10 DUP REM L59 (6 DUPLICATES REMOVED)

=> d que 178

L61	3995 SEA FILE=WPIX ABB=ON PLU=ON ((K531 OR K534) (P) (A42? OR A430 OR A500 OR A54? OR A600 OR A67?))/M0,M1,M2,M3,M4,M5,M6
L62	1350 SEA FILE=WPIX ABB=ON PLU=ON C09B045?/IPC
L63	986 SEA FILE=WPIX ABB=ON PLU=ON L61 AND L62
L65	1642 SEA FILE=WPIX ABB=ON PLU=ON B01J031-12/IPC
L66	12140 SEA FILE=WPIX ABB=ON PLU=ON A02-A06/MC
L67	1 SEA FILE=WPIX ABB=ON PLU=ON L63 AND (L65 OR L66)
L68	2016 SEA FILE=WPIX ABB=ON PLU=ON (NICKEL/BIX OR NI/BIX OR PALLADIUM/BIX OR PD/BIX OR PLATINUM/BIX OR PT/BIX) (10A) AZO?/BIX
L74	30 SEA FILE=WPIX ABB=ON PLU=ON ((TRANSITION OR (D(1W) BLOCK)) (2A) (METAL OR ELEMENT)) (5A) AZO)/BIX
L75	54 SEA FILE=WPIX ABB=ON PLU=ON (L68 OR L74) AND L63
L76	12 SEA FILE=WPIX ABB=ON PLU=ON L75 AND (?CATALY? OR ?POLYMER?)/B IX
L78	12 SEA FILE=WPIX ABB=ON PLU=ON L67 OR L76

=> d his 183

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(FILE 'HCAPLUS, MEDLINE, BIOSIS, PASCAL, APOLLIT, JICST-EPLUS, EMBASE, SCISEARCH, WPIX, CONF, CONFSCI' ENTERED AT 15:19:10 ON 27 JUL 2005)

L83 13 S L81 AND L82

=> d que 183

L79 2617 SEA WEISS, T?/AU

L80 1246 DUP REM L79 (1371 DUPLICATES REMOVED)

L81 29 SEA L80 AND ?CATALY?

L82 42 SEA L80 AND ?POLYMER?

L83 13 SEA L81 AND L82

=> ~~d this full~~

(FILE 'HOME' ENTERED AT 13:01:54 ON 27 JUL 2005)

FILE 'HCAPLUS' ENTERED AT 13:02:07 ON 27 JUL 2005

L1 1 SEA ABB=ON PLU=ON US2004-768291/APPS  
SAVE TEMP L1 NWA291HCAAPP/A

FILE 'STNGUIDE' ENTERED AT 13:02:30 ON 27 JUL 2005

FILE 'HCAPLUS' ENTERED AT 13:02:39 ON 27 JUL 2005  
D IALL

FILE 'STNGUIDE' ENTERED AT 13:02:40 ON 27 JUL 2005

FILE 'STNGUIDE' ENTERED AT 13:02:47 ON 27 JUL 2005

L2 FILE 'WPIX' ENTERED AT 13:04:12 ON 27 JUL 2005  
1 SEA ABB=ON PLU=ON US2004-768291/APPS  
SAVE TEMP L2 NWA291REGAPP/A  
D IALL  
D CMC

FILE 'STNGUIDE' ENTERED AT 13:04:50 ON 27 JUL 2005

FILE 'REGISTRY' ENTERED AT 13:06:03 ON 27 JUL 2005

L3 FILE 'HCAPLUS' ENTERED AT 13:06:06 ON 27 JUL 2005  
TRA L1 1- RN : 19 TERMS

L4 FILE 'REGISTRY' ENTERED AT 13:06:09 ON 27 JUL 2005  
19 SEA ABB=ON PLU=ON L3  
SAVE TEMP L4 NWA291REGAPP/A

FILE 'WPIX' ENTERED AT 13:06:35 ON 27 JUL 2005  
SAVE TEMP L2 NWA291WPIAPP/A

FILE 'STNGUIDE' ENTERED AT 13:06:50 ON 27 JUL 2005  
D SAVED

FILE 'REGISTRY' ENTERED AT 13:07:22 ON 27 JUL 2005  
D SCAN

FILE 'STNGUIDE' ENTERED AT 13:07:35 ON 27 JUL 2005

L5 FILE 'LREGISTRY' ENTERED AT 13:13:04 ON 27 JUL 2005  
STRUCTURE UPLOADED

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L6 STR L5

FILE 'REGISTRY' ENTERED AT 13:16:20 ON 27 JUL 2005  
D SCAN L4

L7 50 SEA SSS SAM L6  
D QUE STAT

L8 19568 SEA SSS FUL L6  
SAVE TEMP L8 NWA291PSET1/A

L9 7 SEA ABB=ON PLU=ON L8 AND L4  
D SCAN

FILE 'STNGUIDE' ENTERED AT 13:19:16 ON 27 JUL 2005  
D SAVED

FILE 'REGISTRY' ENTERED AT 13:20:52 ON 27 JUL 2005

L10 18911 SEA ABB=ON PLU=ON L8 AND (B4 OR B5 OR B6 OR B7 OR B8 OR B1  
OR B2)/PG  
SAVE TEMP L10 NWA291RSET1/A

L11 4906 SEA ABB=ON PLU=ON L8 AND B8/PG  
SAVE TEMP L11 NWA291RSET2/A

FILE 'STNGUIDE' ENTERED AT 13:23:07 ON 27 JUL 2005  
D SAVED

FILE 'REGISTRY' ENTERED AT 13:23:54 ON 27 JUL 2005

L12 7 SEA ABB=ON PLU=ON L4 AND L11

FILE 'STNGUIDE' ENTERED AT 13:24:02 ON 27 JUL 2005

FILE 'REGISTRY' ENTERED AT 13:24:11 ON 27 JUL 2005

L13 ANALYZE PLU=ON L11 1- LC : 4 TERMS (ANALYZE ENDED BY  
USER)

FILE 'LREGISTRY' ENTERED AT 13:25:52 ON 27 JUL 2005

L14 STR L6

FILE 'REGISTRY' ENTERED AT 13:33:00 ON 27 JUL 2005

L15 50 SEA SUB=L8 SSS SAM L14  
D QUE STAT

L16 7180 SEA SUB=L8 SSS FUL L14  
SAVE TEMP L16 NWA291PSET2/A  
D SAVED

L17 2217 SEA ABB=ON PLU=ON L16 AND L11

L18 7 SEA ABB=ON PLU=ON L17 AND L4  
SAVE TEMP L17 NWA291RIND/A

FILE 'STNGUIDE' ENTERED AT 13:36:43 ON 27 JUL 2005  
D SAVED

FILE 'REGISTRY' ENTERED AT 13:37:13 ON 27 JUL 2005

L19 ANALYZE PLU=ON L17 1- LC : 20 TERMS  
D

FILE 'STNGUIDE' ENTERED AT 13:40:39 ON 27 JUL 2005

FILE 'HCAPLUS' ENTERED AT 13:42:35 ON 27 JUL 2005

L20 628 SEA ABB=ON PLU=ON L17

L21 6 SEA ABB=ON PLU=ON L17 (L) CAT/RL

L22 11 SEA ABB=ON PLU=ON L17 (L) ?CATALY?

L23 26 SEA ABB=ON PLU=ON L17 (L) ?POLYMER?

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L24           35 SEA ABB=ON PLU=ON (L21 OR L22 OR L23)

FILE 'STNGUIDE' ENTERED AT 13:44:20 ON 27 JUL 2005

FILE 'HCAPLUS' ENTERED AT 13:45:01 ON 27 JUL 2005

L25       10 SEA ABB=ON PLU=ON L20 AND (POLYMER?)/SC,SX

L26       41 SEA ABB=ON PLU=ON (L24 OR L25)  
D SCAN TI HIT

FILE 'STNGUIDE' ENTERED AT 13:45:38 ON 27 JUL 2005

FILE 'REGISTRY' ENTERED AT 13:47:39 ON 27 JUL 2005

L27       6858 SEA ABB=ON PLU=ON L16 AND L10

L28       4641 SEA ABB=ON PLU=ON L27 NOT L17

FILE 'HCAPLUS' ENTERED AT 13:48:06 ON 27 JUL 2005

L29       1433 SEA ABB=ON PLU=ON L28

L30       7 SEA ABB=ON PLU=ON L28 (L) CAT/RL

L31       70 SEA ABB=ON PLU=ON L28 (L) ?POLYMER?

L32       10 SEA ABB=ON PLU=ON L28 (L) ?CATALY?

L33       78 SEA ABB=ON PLU=ON (L30 OR L31 OR L32)

L34       71 SEA ABB=ON PLU=ON L33 NOT L26

L35       26 SEA ABB=ON PLU=ON L34 AND POLYMER?/SC,SX

L36       67 SEA ABB=ON PLU=ON L35 OR L26

L37       18 SEA ABB=ON PLU=ON L36 AND ?CATALY?

L38       67 SEA ABB=ON PLU=ON L36 OR L26  
D QUE L36

L39       65 SEA ABB=ON PLU=ON L36 AND (PY<2004 OR PRY<2004 OR AY<2004)  
D QUE

L40       57 SEA ABB=ON PLU=ON L39 AND ?POLYMER?

L41       59 SEA ABB=ON PLU=ON L36 AND ?POLYMER?

L42       10 SEA ABB=ON PLU=ON L41 AND ?CATALY?

L43       59 SEA ABB=ON PLU=ON (L41 OR L42)

FILE 'STNGUIDE' ENTERED AT 13:54:08 ON 27 JUL 2005

FILE 'HCAPLUS' ENTERED AT 13:55:35 ON 27 JUL 2005  
SAVE TEMP L43 NWA291HCA1/A

FILE 'STNGUIDE' ENTERED AT 13:55:58 ON 27 JUL 2005  
D SAVED

FILE 'USPATFULL, USPAT2, CAOLD, TOXCENTER, CASREACT' ENTERED AT 13:57:12  
ON 27 JUL 2005

L44       201 SEA ABB=ON PLU=ON L17

L45       188 DUP REM L44. (13 DUPLICATES REMOVED)  
ANSWERS '1-96' FROM FILE USPATFULL  
ANSWERS '97-151' FROM FILE CAOLD  
ANSWERS '152-168' FROM FILE TOXCENTER  
ANSWERS '169-188' FROM FILE CASREACT

L46       32 SEA ABB=ON PLU=ON L45 AND ?CATALY?/BI,IT,ST,CC,CT

L47       81 SEA ABB=ON PLU=ON L45 AND ?POLYMER?/BI,IT,ST,CC,CT

L48       26 SEA ABB=ON PLU=ON L46 AND L47  
SAVE TEMP L48 NWA291MUL1/A  
D SAVED

FILE 'STNGUIDE' ENTERED AT 14:01:01 ON 27 JUL 2005

FILE 'REGISTRY' ENTERED AT 14:01:03 ON 27 JUL 2005

L49       0 SEA ABB=ON PLU=ON L17 AND MEDLINE/LC

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L50           0 SEA ABB=ON PLU=ON L17 AND BIOSIS/LC  
 L51           0 SEA ABB=ON PLU=ON L17 AND EMBASE/LC  
 L52           0 SEA ABB=ON PLU=ON L17 AND CANCERLIT/LC

FILE 'STNGUIDE' ENTERED AT 14:02:36 ON 27 JUL 2005

FILE 'REGISTRY' ENTERED AT 14:05:15 ON 27 JUL 2005  
 L53           0 SEA ABB=ON PLU=ON (L49 OR L50 OR L51 OR L52)  
               SAVE TEMP L53 NWA291MBE/A

FILE 'STNGUIDE' ENTERED AT 14:05:59 ON 27 JUL 2005  
               D SAVED

FILE 'HCAPLUS' ENTERED AT 14:08:32 ON 27 JUL 2005  
 L54           QUE ABB=ON PLU=ON NICKEL OR NI OR PALLADIUM OR PD OR  
               PLATINUM OR PT

FILE 'PASCAL, JICST-EPLUS, SCISEARCH, APOLLIT' ENTERED AT 14:09:19 ON 27  
 JUL 2005

L55           148 SEA ABB=ON PLU=ON L54 (5A) AZO  
 L56           43 SEA ABB=ON PLU=ON ((TRANSITION OR (D(1W) BLOCK)) (2A) (METAL  
               OR ELEMENT)) (5A) AZO  
 L57           9 SEA ABB=ON PLU=ON (L55 OR L56) (10A) ?CATALY?  
 L58           7 SEA ABB=ON PLU=ON (L55 OR L56) (10A) ?POLYMER?  
 L59           16 SEA ABB=ON PLU=ON (L57 OR L58)  
 L60           10 DUP REM L59 (6 DUPLICATES REMOVED)  
               ANSWERS '1-6' FROM FILE PASCAL  
               ANSWER '7' FROM FILE JICST-EPLUS  
               ANSWERS '8-10' FROM FILE SCISEARCH  
               D SCAN  
               SAVE TEMP L60 NWA291MUL2/A  
               D SAVED

FILE 'STNGUIDE' ENTERED AT 14:14:25 ON 27 JUL 2005

FILE 'WPIX' ENTERED AT 15:04:44 ON 27 JUL 2005  
 L61           3995 SEA ABB=ON PLU=ON ((K531 OR K534) (P) (A42? OR A430 OR A500  
               OR A54? OR A600 OR A67?))/M0,M1,M2,M3,M4,M5,M6  
 L62           1350 SEA ABB=ON PLU=ON C09B045?/IPC  
 L63           986 SEA ABB=ON PLU=ON L61 AND L62  
 L64           1 SEA ABB=ON PLU=ON L63 AND L2  
 L65           1642 SEA ABB=ON PLU=ON B01J031-12/IPC  
 L66           12140 SEA ABB=ON PLU=ON A02-A06/MC  
 L67           1 SEA ABB=ON PLU=ON L63 AND (L65 OR L66)  
 L68           2016 SEA ABB=ON PLU=ON (NICKEL/BIX OR NI/BIX OR PALLADIUM/BIX OR  
               PD/BIX OR PLATINUM/BIX OR PT/BIX) (10A) AZO?/BIX  
 L69           50 SEA ABB=ON PLU=ON L63 AND L68  
 L70           594 SEA ABB=ON PLU=ON L68 (15A) (?CATALY? OR ?POLYMER?)/BIX  
 L71           1227 SEA ABB=ON PLU=ON L68 (L) (?CATALY? OR ?POLYMER?)/BIX  
 L72           11 SEA ABB=ON PLU=ON L69 AND (?CATALY? OR ?POLYMER?)/BIX  
               D TRI 1-11

FILE 'STNGUIDE' ENTERED AT 15:12:01 ON 27 JUL 2005

FILE 'WPIX' ENTERED AT 15:12:49 ON 27 JUL 2005  
 L73           0 SEA ABB=ON PLU=ON L72 AND L2  
               D QUE L60  
 L74           30 SEA ABB=ON PLU=ON (((TRANSITION OR (D(1W) BLOCK)) (2A)  
               (METAL OR ELEMENT)) (5A) AZO)/BIX  
 L75           54 SEA ABB=ON PLU=ON (L68 OR L74) AND L63

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L76        12 SEA ABB=ON PLU=ON L75 AND (?CATALY? OR ?POLYMER?)/BIX  
L77        1 SEA ABB=ON PLU=ON L2 AND L76  
L78        12 SEA ABB=ON PLU=ON L67 OR L76  
            SAVE TEMP L78 NWA291WPI1/A

FILE 'STNGUIDE' ENTERED AT 15:16:15 ON 27 JUL 2005  
D SAVED

FILE 'HCAPLUS, MEDLINE, BIOSIS, PASCAL, APOLLIT, JICST-EPLUS, EMBASE,  
SCISEARCH, WPIX, CONF, CONFSCI' ENTERED AT 15:19:10 ON 27 JUL 2005

L79        2617 SEA ABB=ON PLU=ON WEISS, T/?AU  
L80        1246 DUP REM L79 (1371 DUPLICATES REMOVED)  
            ANSWERS '1-263' FROM FILE HCAPLUS  
            ANSWERS '264-598' FROM FILE MEDLINE  
            ANSWERS '599-795' FROM FILE BIOSIS  
            ANSWERS '796-906' FROM FILE PASCAL  
            ANSWER '907' FROM FILE APOLLIT  
            ANSWERS '908-978' FROM FILE EMBASE  
            ANSWERS '979-1128' FROM FILE SCISEARCH  
            ANSWERS '1129-1204' FROM FILE WPIX  
            ANSWERS '1205-1246' FROM FILE CONFSCI  
L81        29 SEA ABB=ON PLU=ON L80 AND ?CATALY?  
L82        42 SEA ABB=ON PLU=ON L80 AND ?POLYMER?  
L83        13 SEA ABB=ON PLU=ON L81 AND L82  
            SAVE TEMP L83 NWA291MULINV/A  
D SAVED

FILE 'STNGUIDE' ENTERED AT 15:22:46 ON 27 JUL 2005

FILE 'LREGISTRY' ENTERED AT 15:23:04 ON 27 JUL 2005

FILE 'REGISTRY' ENTERED AT 15:23:07 ON 27 JUL 2005

FILE 'ZCAPLUS' ENTERED AT 15:23:10 ON 27 JUL 2005

FILE 'HCAPLUS' ENTERED AT 15:23:14 ON 27 JUL 2005

FILE 'MEDLINE' ENTERED AT 15:23:17 ON 27 JUL 2005

FILE 'BIOSIS' ENTERED AT 15:23:20 ON 27 JUL 2005

FILE 'PASCAL' ENTERED AT 15:23:23 ON 27 JUL 2005

FILE 'APOLLIT' ENTERED AT 15:23:27 ON 27 JUL 2005

FILE 'JICST-EPLUS' ENTERED AT 15:23:32 ON 27 JUL 2005

FILE 'EMBASE' ENTERED AT 15:23:35 ON 27 JUL 2005

FILE 'SCISEARCH' ENTERED AT 15:23:39 ON 27 JUL 2005

FILE 'WPIX' ENTERED AT 15:23:42 ON 27 JUL 2005

FILE 'CONF' ENTERED AT 15:23:46 ON 27 JUL 2005

FILE 'CONFSCI' ENTERED AT 15:23:50 ON 27 JUL 2005

FILE 'USPATFULL' ENTERED AT 15:23:55 ON 27 JUL 2005

FILE 'USPAT2' ENTERED AT 15:23:59 ON 27 JUL 2005

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FILE 'CAOLD' ENTERED AT 15:24:02 ON 27 JUL 2005  
FILE 'TOXCENTER' ENTERED AT 15:24:06 ON 27 JUL 2005  
FILE 'CASREACT' ENTERED AT 15:24:10 ON 27 JUL 2005  
FILE 'STNGUIDE' ENTERED AT 15:24:12 ON 27 JUL 2005  
D QUE STAT  
D QUE STAT L8  
D QUE STAT L16  
D QUE L43  
D QUE NOS L48  
D QUE NOS L53  
D QUE NOS L60  
D QUE L78

FILE 'HCAPLUS, USPATFULL, PASCAL, JICST-EPLUS, SCISEARCH, WPIX' ENTERED  
AT 15:26:08 ON 27 JUL 2005

L84 105 DUP REM L43 L48 L60 L78 (2 DUPLICATES REMOVED)  
ANSWERS '1-59' FROM FILE HCAPLUS  
ANSWERS '60-84' FROM FILE USPATFULL  
ANSWERS '85-90' FROM FILE PASCAL  
ANSWER '91' FROM FILE JICST-EPLUS  
ANSWERS '92-94' FROM FILE SCISEARCH  
ANSWERS '95-105' FROM FILE WPIX

FILE 'STNGUIDE' ENTERED AT 15:26:33 ON 27 JUL 2005

FILE 'HCAPLUS, USPATFULL, PASCAL, JICST-EPLUS, SCISEARCH, WPIX' ENTERED  
AT 15:26:40 ON 27 JUL 2005  
D IBIB ED AB HITSTR

FILE 'STNGUIDE' ENTERED AT 15:26:41 ON 27 JUL 2005

FILE 'HCAPLUS, USPATFULL, PASCAL, JICST-EPLUS, SCISEARCH, WPIX' ENTERED  
AT 15:27:09 ON 27 JUL 2005  
D IBIB ED AB HITSTR 2-59

FILE 'STNGUIDE' ENTERED AT 15:27:29 ON 27 JUL 2005

FILE 'HCAPLUS, USPATFULL, PASCAL, JICST-EPLUS, SCISEARCH, WPIX' ENTERED  
AT 15:28:09 ON 27 JUL 2005  
D IBIB AB HITSTR 60

FILE 'STNGUIDE' ENTERED AT 15:28:11 ON 27 JUL 2005

FILE 'HCAPLUS, USPATFULL, PASCAL, JICST-EPLUS, SCISEARCH, WPIX' ENTERED  
AT 15:28:29 ON 27 JUL 2005  
D IBIB AB HITSTR 61-84

FILE 'STNGUIDE' ENTERED AT 15:28:42 ON 27 JUL 2005

FILE 'HCAPLUS, USPATFULL, PASCAL, JICST-EPLUS, SCISEARCH, WPIX' ENTERED  
AT 15:29:23 ON 27 JUL 2005  
D IBIB ED AB HITIND 85-94

FILE 'STNGUIDE' ENTERED AT 15:29:31 ON 27 JUL 2005

FILE 'HCAPLUS, USPATFULL, PASCAL, JICST-EPLUS, SCISEARCH, WPIX' ENTERED

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AT 15:30:02 ON 27 JUL 2005  
D IALL ABEQ TECH ABEX 95-

FILE 'STNGUIDE' ENTERED AT 15:30:11 ON 27 JUL 2005  
D QUE L83

FILE 'HCAPLUS' ENTERED AT 15:31:15 ON 27 JUL 2005  
D IBIB ED AB L83

FILE 'STNGUIDE' ENTERED AT 15:31:15 ON 27 JUL 2005

FILE 'HCAPLUS' ENTERED AT 15:31:26 ON 27 JUL 2005  
D IBIB ED AB L83 2-

FILE 'STNGUIDE' ENTERED AT 15:31:29 ON 27 JUL 2005

FILE 'STNGUIDE' ENTERED AT 15:32:14 ON 27 JUL 2005  
D QUE STAT L8  
D QUE STAT L16  
D QUE L43  
D QUE NOS L48  
D QUE L53  
D QUE L60  
D QUE L78  
D QUE L83

FILE HOME

FILE HCAPLUS

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FILE COVERS 1907 - 27 Jul 2005 VOL 143 ISS 5  
FILE LAST UPDATED: 26 Jul 2005 (20050726/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE STNGUIDE  
FILE CONTAINS CURRENT INFORMATION.  
LAST RELOADED: Jul 22, 2005 (20050722/UP).

FILE WPIX  
FILE LAST UPDATED: 25 JUL 2005 <20050725/UP>  
MOST RECENT DERWENT UPDATE: 200547 <200547/DW>  
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,  
PLEASE VISIT:

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[<<<](http://www.stn-international.de/training_center/patents/stn_guide.pdf)

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE  
<http://thomsonderwent.com/coverage/latestupdates/> <<<

>>> FOR INFORMATION ON ALL DERWENT WORLD PATENTS INDEX USER  
GUIDES, PLEASE VISIT:  
<http://thomsonderwent.com/support/userguides/> <<<

>>> NEW! FAST-ALERTING ACCESS TO NEWLY-PUBLISHED PATENT  
DOCUMENTATION NOW AVAILABLE IN DERWENT WORLD PATENTS INDEX  
FIRST VIEW - FILE WPIFV.  
FOR FURTHER DETAILS: [<<<](http://www.thomsonderwent.com/dwpifv)

>>> THE CPI AND EPI MANUAL CODES HAVE BEEN REVISED FROM UPDATE 200501.  
PLEASE CHECK:  
<http://thomsonderwent.com/support/dwpiref/reftools/classification/code-rev>  
FOR DETAILS. <<<

#### FILE REGISTRY

Property values tagged with IC are from the ZIC/VINITI data file  
provided by InfoChem.

STRUCTURE FILE UPDATES: 26 JUL 2005 HIGHEST RN 857144-48-0  
DICTIONARY FILE UPDATES: 26 JUL 2005 HIGHEST RN 857144-48-0

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

\*\*\*\*\*  
\*  
\* The CA roles and document type information have been removed from \*  
\* the IDE default display format and the ED field has been added, \*  
\* effective March 20, 2005. A new display format, IDERL, is now \*  
\* available and contains the CA role and document type information. \*  
\*  
\*\*\*\*\*

Structure search iteration limits have been increased. See HELP SLIMITS  
for details.

Experimental and calculated property data are now available. For more  
information enter HELP PROP at an arrow prompt in the file or refer  
to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

#### FILE LREGISTRY

LREGISTRY IS A STATIC LEARNING FILE

NEW CAS INFORMATION USE POLICIES, ENTER HELP USAGETERMS FOR DETAILS.

#### FILE USPATFULL

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 26 Jul 2005 (20050726/PD)

FILE LAST UPDATED: 26 Jul 2005 (20050726/ED)

HIGHEST GRANTED PATENT NUMBER: US6922846

HIGHEST APPLICATION PUBLICATION NUMBER: US2005160510

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CA INDEXING IS CURRENT THROUGH 26 Jul 2005 (20050726/UPCA)  
 ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 26 Jul 2005 (20050726/PD)  
 REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2005  
 USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2005

```
>>> USPAT2 is now available. USPATFULL contains full text of the      <<<
>>> original, i.e., the earliest published granted patents or      <<<
>>> applications. USPAT2 contains full text of the latest US      <<<
>>> publications, starting in 2001, for the inventions covered in      <<<
>>> USPATFULL. A USPATFULL record contains not only the original      <<<
>>> published document but also a list of any subsequent      <<<
>>> publications. The publication number, patent kind code, and      <<<
>>> publication date for all the US publications for an invention      <<<
>>> are displayed in the PI (Patent Information) field of USPATFULL      <<<
>>> records and may be searched in standard search fields, e.g., /PN,      <<<
>>> /PK, etc.                                              <<<

>>> USPATFULL and USPAT2 can be accessed and searched together      <<<
>>> through the new cluster USPATALL. Type FILE USPATALL to      <<<
>>> enter this cluster.                                              <<<
>>>
>>> Use USPATALL when searching terms such as patent assignees,      <<<
>>> classifications, or claims, that may potentially change from      <<<
>>> the earliest to the latest publication.                                              <<<
```

This file contains CAS Registry Numbers for easy and accurate substance identification.

#### FILE USPAT2

FILE COVERS 2001 TO PUBLICATION DATE: 26 Jul 2005 (20050726/PD)  
 FILE LAST UPDATED: 26 Jul 2005 (20050726/ED)  
 HIGHEST GRANTED PATENT NUMBER: US2005131306  
 HIGHEST APPLICATION PUBLICATION NUMBER: US2005160493  
 CA INDEXING IS CURRENT THROUGH 26 Jul 2005 (20050726/UPCA)  
 ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 26 Jul 2005 (20050726/PD)  
 REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2005  
 USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2005

USPAT2 is a companion file to USPATFULL. USPAT2 contains full text of the latest US publications, starting in 2001, for the inventions covered in USPATFULL. USPATFULL contains full text of the original published US patents from 1971 to date and the original applications from 2001. In addition, a USPATFULL record for an invention contains a complete list of publications that may be searched in standard search fields, e.g., /PN, /PK, etc.

USPATFULL and USPAT2 can be accessed and searched together through the new cluster USPATALL. Type FILE USPATALL to enter this cluster.

Use USPATALL when searching terms such as patent assignees, classifications, or claims, that may potentially change from the earliest to the latest publication.

FILE CAOLD  
 FILE COVERS 1907-1966  
 FILE LAST UPDATED: 01 May 1997 (19970501/UP)

This file contains CAS Registry Numbers for easy and accurate substance identification. Title keywords, authors, patent

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assignees, and patent information, e.g., patent numbers, are now searchable from 1907-1966. TIFF images of CA abstracts printed between 1907-1966 are available in the PAGE display formats.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file supports REGISTRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

#### FILE TOXCENTER

FILE COVERS 1907 TO 19 Jul 2005 (20050719/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TOXCENTER has been enhanced with new files segments and search fields. See HELP CONTENT for more information.

TOXCENTER thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2005 vocabulary. See <http://www.nlm.nih.gov/mesh/> and [http://www.nlm.nih.gov/pubs/techbull/nd04/nd04\\_mesh.html](http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html) for a description of changes.

#### FILE CASREACT

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FILE CONTENT:1840 - 24 Jul 2005 VOL 143 ISS 4

New CAS Information Use Policies, enter HELP USAGETERMS for details.

\*\*\*\*\*  
\*  
\* CASREACT now has more than 9.2 million reactions \*  
\*  
\*\*\*\*\*

Some CASREACT records are derived from the ZIC/VINITI database (1974-1991) provided by InfoChem, INPI data prior to 1986, and Biotransformations database compiled under the direction of Professor Dr. Klaus Kieslich.

This file contains CAS Registry Numbers for easy and accurate substance identification.

#### FILE PASCAL

FILE LAST UPDATED: 25 JUL 2005 <20050725/UP>  
FILE COVERS 1977 TO DATE.

>>> SIMULTANEOUS LEFT AND RIGHT TRUNCATION IS AVAILABLE  
IN THE BASIC INDEX (/BI) FIELD <<<

#### FILE JICST-EPLUS

FILE COVERS 1985 TO 25 JUL 2005 (20050725/ED)

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THE JICST-EPLUS FILE HAS BEEN RELOADED TO REFLECT THE 1999 CONTROLLED TERM (/CT) THESAURUS RELOAD.

FILE SCISEARCH

FILE COVERS 1974 TO 22 Jul 2005 (20050722/ED)

SCISEARCH has been reloaded, see HELP RLOAD for details.

FILE APOLLIT

FILE LAST UPDATED: 27 JUL 2005 <20050727/UP>

FILE COVERS 1973 TO DATE

FILE MEDLINE

FILE LAST UPDATED: 26 JUL 2005 (20050726/UP). FILE COVERS 1950 TO DATE.

On December 19, 2004, the 2005 MeSH terms were loaded.

The MEDLINE reload for 2005 is now available. For details enter HELP RLOAD at an arrow prompt (=>). See also:

<http://www.nlm.nih.gov/mesh/>

[http://www.nlm.nih.gov/pubs/techbull/nd04/nd04\\_mesh.html](http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html)

OLDMEDLINE now back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2005 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE BIOSIS

FILE COVERS 1969 TO DATE.

CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNS) PRESENT FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 21 July 2005 (20050721/ED)

FILE RELOADED: 19 October 2003.

FILE EMBASE

FILE COVERS 1974 TO 21 Jul 2005 (20050721/ED)

EMBASE has been reloaded. Enter HELP RLOAD for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE CONF

FILE LAST UPDATED: 22 JUL 2005 <20050722/UP>  
FILE COVERS 1976 TO DATE.

FILE CONFSCI

FILE COVERS 1973 TO 25 May 2005 (20050525/ED)

FILE ZCAPLUS

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Nwaonicha 10/768,291

07/27/2005

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FILE COVERS 1907 - 27 Jul 2005 VOL 143 ISS 5  
FILE LAST UPDATED: 26 Jul 2005 (20050726/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

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214

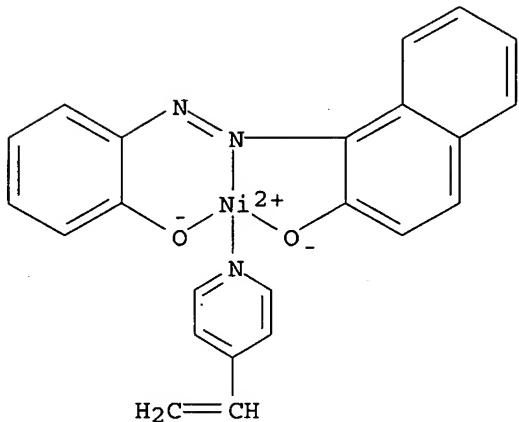
Nyaonicha 10/768,291

07/27/2005

)-, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

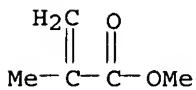
CM 1

CRN 147044-74-4  
 CMF C23 H17 N3 Ni O2  
 CCI CCS



CM 2

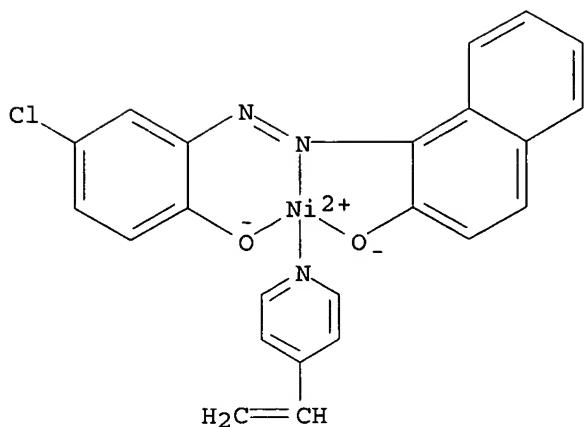
CRN 80-62-6  
 CMF C5 H8 O2



RN 147044-77-7 HCAPLUS  
 CN Nickel, [1-[(5-chloro-2-hydroxyphenyl)azo]-2-naphthalenolato(2-)](4-ethenylpyridine)-, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

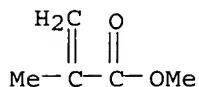
CRN 147044-76-6  
 CMF C23 H16 Cl N3 Ni O2  
 CCI CCS



CM 2

CRN 80-62-6

CMF C5 H8 O2



RN 147469-43-0 HCPLUS

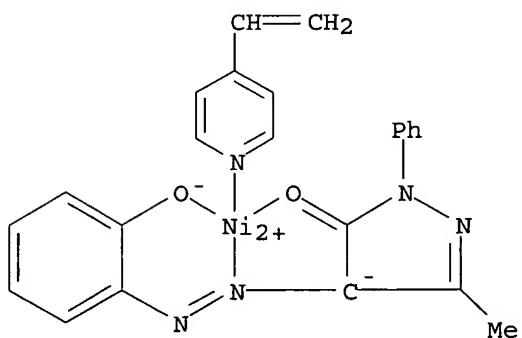
CN Nickel, [2,4-dihydro-4-[(2-hydroxyphenyl)azo]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)](4-ethenylpyridine)-, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 147469-42-9

CMF C23 H19 N5 Ni O2

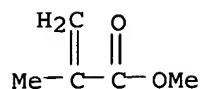
CCI CCS



CM 2

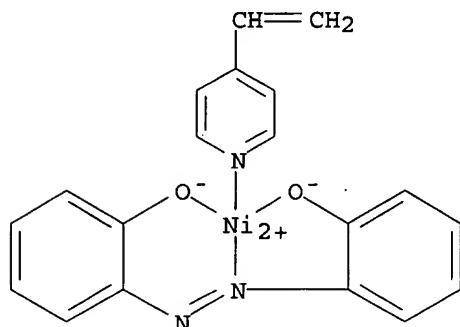
CRN 80-62-6

CMF C5 H8 O2

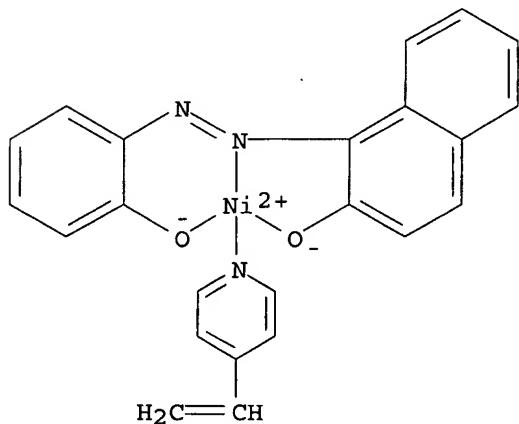


IT 147044-72-2P 147044-74-4P 147044-76-6P  
 147312-52-5P 147312-53-6P 147312-54-7P  
 147361-09-9P 147361-10-2P 147361-15-7P  
 147469-42-9P 147486-63-3P  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (preparation of, as polymerizable dye)

RN 147044-72-2 HCPLUS

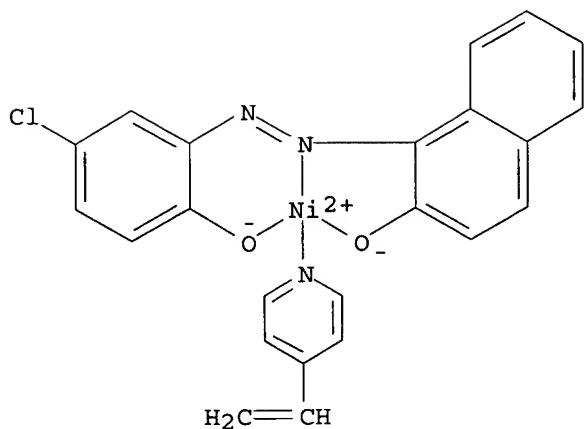
CN Nickel, [[2,2'-(azo- $\kappa$ N)bis[phenolato- $\kappa$ O]](2-)](4-ethenylpyridine)- (9CI) (CA INDEX NAME)

RN 147044-74-4 HCPLUS

CN Nickel, (4-ethenylpyridine)[1-[[2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-2-naphthalenolato(2-)- $\kappa$ O]- (9CI) (CA INDEX NAME)

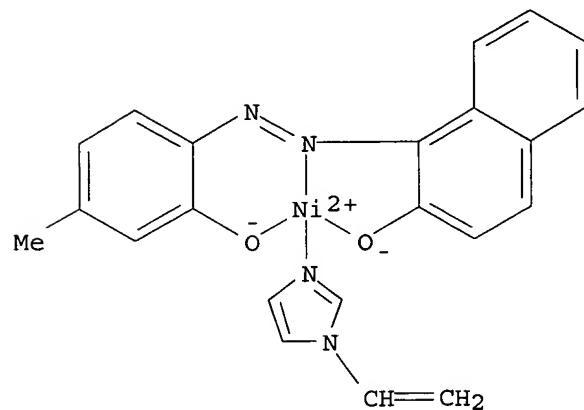
RN 147044-76-6 HCPLUS

CN Nickel, [1-[(5-chloro-2-hydroxyphenyl)azo]-2-naphthalenolato(2-)](4-ethenylpyridine)- (9CI) (CA INDEX NAME)



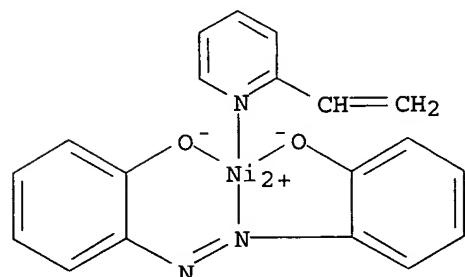
RN 147312-52-5 HCAPLUS

CN Nickel, [(1-ethenyl-1H-imidazole-N3) [1- [(2-hydroxy-4-methylphenyl)azo] -2-naphthalenolato(2-)] - (9CI) (CA INDEX NAME)



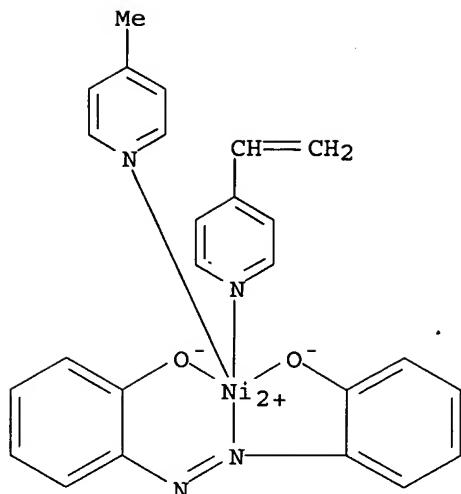
RN 147312-53-6 HCAPLUS

CN Nickel, [[2,2'-(azo- $\kappa$ N)bis[phenolato- $\kappa$ O]] (2-) ] (2-ethenylpyridine) - (9CI) (CA INDEX NAME)

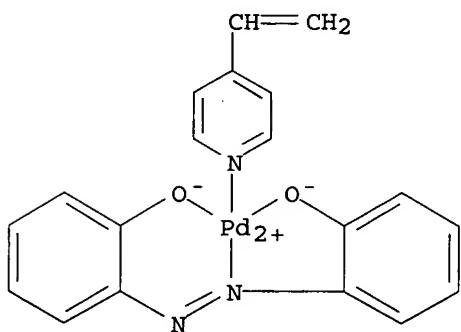


RN 147312-54-7 HCAPLUS

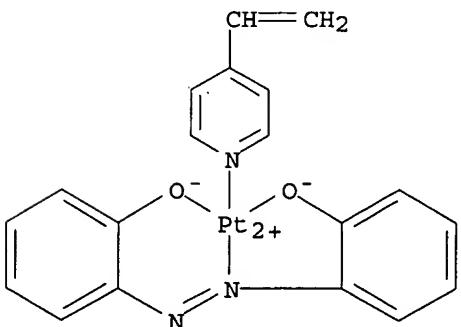
CN Nickel, [[2,2'-azobis[phenolato]] (2-) -N,O,O'] (4-ethenylpyridine) (4-methylpyridine) - (9CI) (CA INDEX NAME)



RN 147361-09-9 HCAPLUS

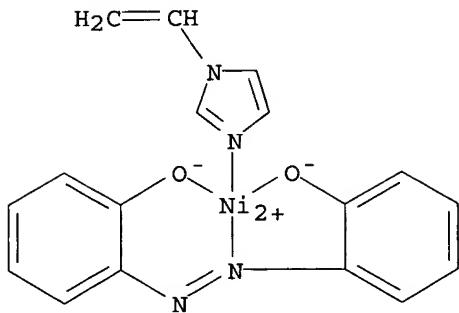
CN Palladium, [[2,2'-(azo- $\kappa$ N)bis[phenolato- $\kappa$ O]](2-)](4-ethenylpyridine)-, (SP-4-2)- (9CI) (CA INDEX NAME)

RN 147361-10-2 HCAPLUS

CN Platinum, [[2,2'-(azo- $\kappa$ N)bis[phenolato- $\kappa$ O]](2-)](4-ethenylpyridine)-, (SP-4-2)- (9CI) (CA INDEX NAME)

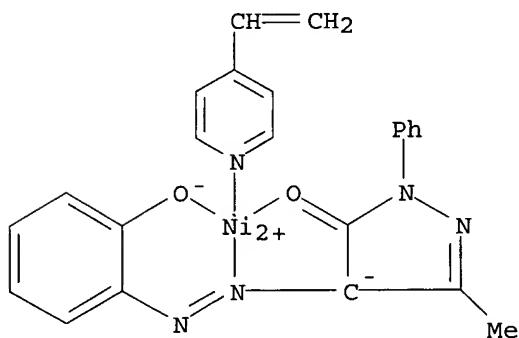
RN 147361-15-7 HCAPLUS

CN Nickel, [ [2,2'-(azo- $\kappa$ N)bis[phenolato- $\kappa$ O]](2-) ] (1-ethenyl-1H-imidazole- $\kappa$ N3)- (9CI) (CA INDEX NAME)



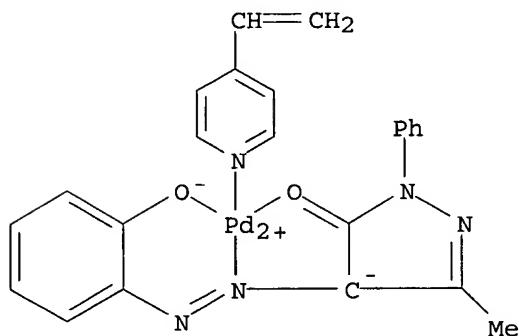
RN 147469-42-9 HCPLUS

CN Nickel, [2,4-dihydro-4-[ [2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)- $\kappa$ O3] (4-ethenylpyridine)- (9CI) (CA INDEX NAME)



RN 147486-63-3 HCPLUS

CN Palladium, [2,4-dihydro-4-[ [2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)- $\kappa$ O3] (4-ethenylpyridine)-, (SP-4-2)- (9CI) (CA INDEX NAME)

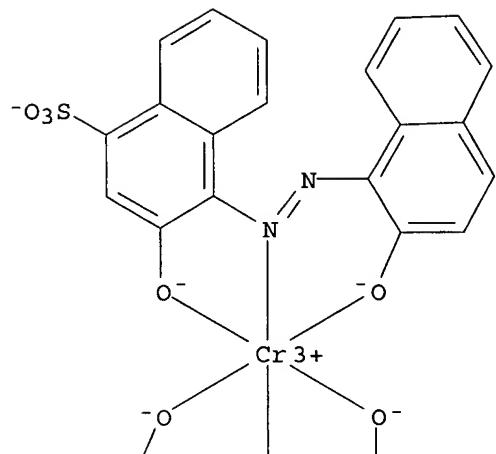


DOCUMENT NUMBER: 117:91040  
 TITLE: Polymer scale preventive agent,  
 polymerization vessel for preventing  
 polymer scale deposition, and manufacture of  
 polymers using this vessel  
 INVENTOR(S): Shimizu, Toshihide; Shigemitsu, Minoru  
 PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan  
 SOURCE: Eur. Pat. Appl., 15 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 3  
 PATENT INFORMATION:

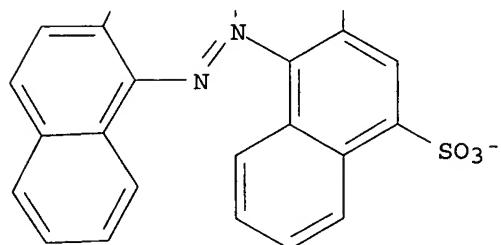
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 482593	A1	19920429	EP 1991-118010	19911022
EP 482593	B1	19950111		
R: BE, DE, ES, FR, GB, GR, IT, NL, SE				
CA 2050880	AA	19920308	CA 1991-2050880	19910906
CA 2053827	AA	19920424	CA 1991-2053827	19911021
AU 9186047	A1	19920430	AU 1991-86047	19911022
AU 637531	B2	19930527		
CN 1061977	A	19920617	CN 1991-111081	19911022
JP 05005002	A2	19930114	JP 1991-302285	19911022
JP 2627031	B2	19970702		
HU 62018	A2	19930329	HU 1991-3322	19911022
HU 211784	B	19951228		
ES 2069796	T3	19950516	ES 1991-118010	19911022
PL 168593	B1	19960329	PL 1991-292132	19911022
PRIORITY APPLN. INFO.:			JP 1990-284559	A 19901023
			JP 1990-238530	A 19900907
			JP 1990-238531	A 19900907

- ED Entered STN: 05 Sep 1992  
 AB Vinyl monomers are polymerized without scale formation in reactors  
 coated with scale-preventing coatings comprising N-containing organic compds.  
 bearing  $\geq 5$  conjugated  $\pi$  bonds, anionic organic sulfonic or  
 carboxylic acids bearing  $\geq 5$  conjugated  $\pi$  bonds, and  
 vinylpyrrolidone-based polymers. The products of the  
 polymerization have very few fish eyes. Vinyl chloride was  
 polymerized in a reactor coated with a 60:30:10 mixture of Sudan Black B  
 (N-containing compound), C.I. Acid Black 2 (anionic compound), and  
 poly(vinylpyrrolidone) to give, after 10 polymerization runs, no scale  
 buildup in liquid or liq-gas interface areas.  
 IT 12392-64-2, C.I. Acid blue 161  
 RL: USES (Uses)  
 (scale-preventing coatings, containing nitrogen-containing compds. and  
 vinylpyrrolidinone polymers, for reactors for vinyl monomer  
 polymerization)  
 RN 12392-64-2 HCPLUS  
 CN Chromate(3-), bis[3-hydroxy-4-[(2-hydroxy-1-naphthalenyl)azo]-1-  
 naphthalenesulfonato(3-)]-, disodium hydrogen (9CI) (CA INDEX NAME)

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● H<sup>+</sup>● 2 Na<sup>+</sup>

L84 ANSWER 37 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1993:255554 HCPLUS  
 DOCUMENT NUMBER: 118:255554  
 TITLE: Scale-preventing coatings for reactors for  
 polymerization of unsaturated compounds  
 INVENTOR(S): Shimizu, Toshihide; Shigemitsu, Minoru

PATENT ASSIGNEE(S) : Japan  
 SOURCE: Can. Pat. Appl., 30 pp.  
 CODEN: CPXXEB  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CA 2065513	AA	19921009	CA 1992-2065513	19920407
JP 04370101	A2	19921222	JP 1991-210312	19910726
US 5364466	A	19941115	US 1992-865265	19920408
PRIORITY APPLN. INFO.:			JP 1991-103111	A 19910408
			JP 1991-210312	A 19910727

ED Entered STN: 26 Jun 1993

AB The title coatings comprise N-containing organic compound bearing  $\geq 5$  conjugated  $\pi$  bonds and free of sulfonic acid or carboxy groups, anionic organic compds. bearing  $\geq 5$  conjugated  $\pi$  bonds and sulfonic acid or carboxy groups, and H<sub>2</sub>O-soluble polysaccharides. A typical coating contained Sudan Black B, C.I. Acid Black 2, and chitosan.

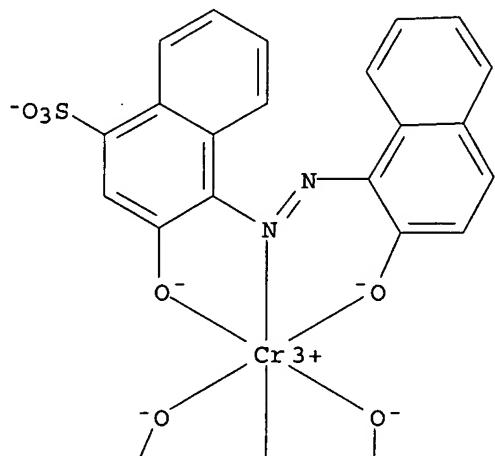
IT 12392-64-2, C.I. Acid blue 161

RL: USES (Uses)  
 (scale-preventing coatings containing, for reactors for polymerization of unsatd. compds.)

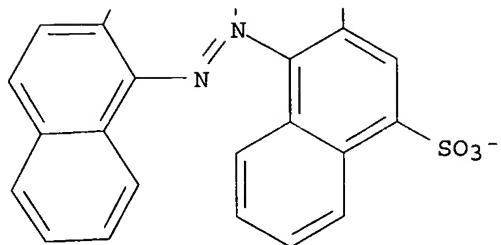
RN 12392-64-2 HCPLUS

CN Chromate(3-), bis[3-hydroxy-4-[(2-hydroxy-1-naphthalenyl)azo]-1-naphthalenesulfonato(3-)]-, disodium hydrogen (9CI) (CA INDEX NAME)

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● H<sup>+</sup>● 2 Na<sup>+</sup>

L84 ANSWER 38 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1991:608881 HCPLUS

DOCUMENT NUMBER: 115:208881

TITLE: Prevention of scale in polymerization of vinyl halides

INVENTOR(S): Watanabe, Mikio; Usu, Masahiro; Ueno, Susumu

PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03131602	A2	19910605	JP 1989-269883	19891017
PRIORITY APPLN. INFO.:			JP 1989-269883	19891017

ED Entered STN: 15 Nov 1991

AB In the title process, reactors are coated with scale inhibitors and then with compns. containing alkaline earth compds. and anionic dyes. Thus, suspension

polymerization of vinyl chloride and vinyl acetate in a reactor coated with C.I. Acid Black 2 and then with a 1:1 mixture of Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub> and C.I. Acid Blue 40 resulted in no scale; vs. 1800 g/m<sup>2</sup> without coating, or 150 with only 1 coating.

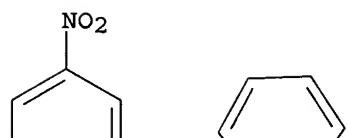
IT 6408-12-4, C.I. Acid Black 124

RL: USES (Uses)  
(scale inhibitors, for reactors for suspension polymerization)

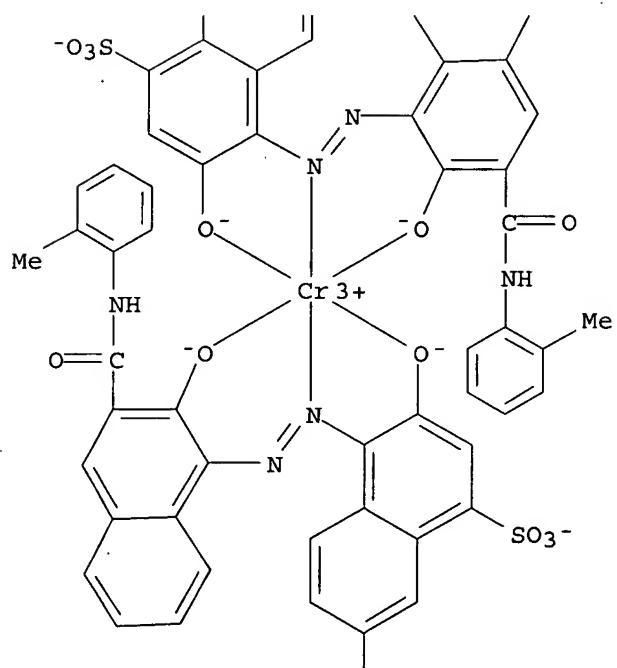
RN 6408-12-4 HCPLUS

CN Chromate(3-), bis[3-(hydroxy- $\kappa$ O)-4-[[2-(hydroxy- $\kappa$ O)-3-[(2-methylphenyl)amino]carbonyl]-1-naphthalenyl]azo- $\kappa$ N1]-7-nitro-1-naphthalenesulfonato(3-)], disodium hydrogen (9CI) (CA INDEX NAME)

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NO<sub>2</sub>● H<sup>+</sup>● 2 Na<sup>+</sup>

L84 ANSWER 39 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1991:608876 HCAPLUS  
 DOCUMENT NUMBER: 115:208876  
 TITLE: Prevention of scale in polymerization of vinyl halides  
 INVENTOR(S): Watanabe, Mikio; Usu, Masahiro; Ueno, Susumu  
 PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03111401	A2	19910513	JP 1989-248790	19890925
PRIORITY APPLN. INFO.:			JP 1989-248790	19890925

ED Entered STN: 15 Nov 1991

AB The inner wall of a reactor is doubly coated first with a scale preventing agent and then with a composition containing alkaline earth metal compds.

Thus,

suspension polymerization of vinyl chloride and vinyl acetate in a reactor doubly coated with C.I. Acid Black 2 and Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub> (adjusted to pH 2.5 with HClO<sub>4</sub>) produced 10 g scale/m<sup>2</sup>, vs. 1800 without coating or 150 for coating with C.I. Acid Balck 2 alone.

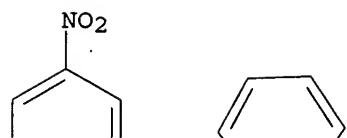
IT 6408-12-4, C.I. Acid Black 124

RL: USES (Uses)  
 (scale preventing agent, coating of reactors with alkaline earth metal salts and, for vinyl chloride polymerization)

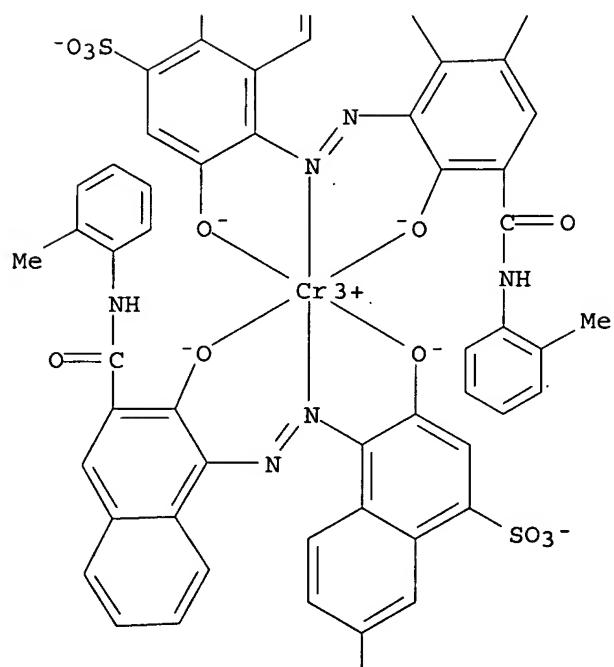
RN 6408-12-4 HCAPLUS

CN Chromate(3-), bis[3-(hydroxy-κO)-4-[[2-(hydroxy-κO)-3-[(2-methylphenyl)amino]carbonyl]-1-naphthalenyl]azo-κN1]-7-nitro-1-naphthalenesulfonato(3-)], disodium hydrogen (9CI) (CA INDEX NAME)

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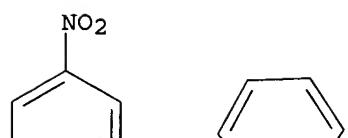
NO<sub>2</sub>● H<sup>+</sup>● 2 Na<sup>+</sup>

L84 ANSWER 40 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1991:537010 HCPLUS  
 DOCUMENT NUMBER: 115:137010  
 TITLE: Prevention of polymer scale adhesion  
 INVENTOR(S): Watanabe, Mikio; Usu, Masahiro; Ueno, Susumu  
 PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

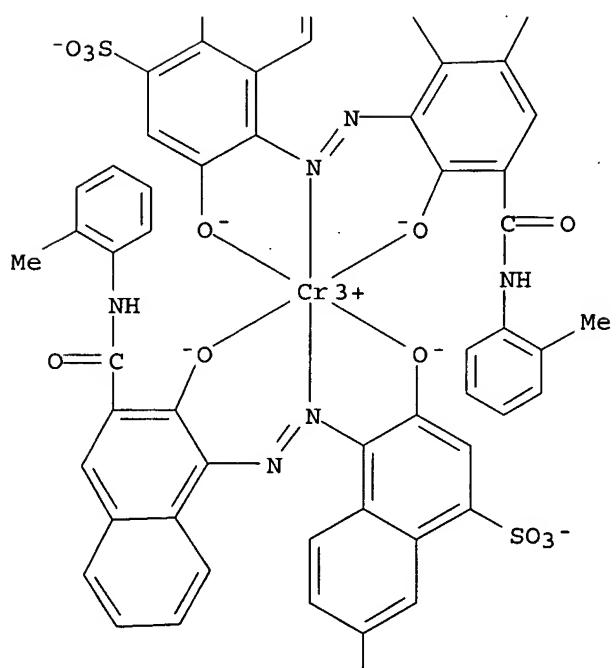
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03095202	A2	19910419	JP 1989-233399	19890908
JP 06017410	B4	19940309		

PRIORITY APPLN. INFO.: JP 1989-233399 19890908  
 ED Entered STN: 05 Oct 1991  
 AB The title process in vinyl halide polymerization involves coating the polymerizer inner walls with a scale preventor then with a solution containing alkaline earth metal compound and inorg. colloid. A polymerizer inner wall was coated with a 0.5% aqueous C.I. Acid Black 2 solution, dried at 50° C for 15 min, coated with 0.5% aqueous 1:3 Ca phosphate-colloidal silica (pH 3.5, phosphoric acid), dried at 50° for 20 min, washed with water, and used in polymerization of vinyl chloride and vinyl acetate in water with no scale formation, compared with 1800 g/m<sup>2</sup> scale formation without both coatings, 150 g/m<sup>2</sup> with first coating only, and 140 g/m<sup>2</sup> with the second coating only omitting the first coating.  
 IT 6408-12-4, C.I. Acid Black 124  
 RL: USES (Uses)  
 (scale-preventing coatings containing, for vinyl halide polymerization reactors)  
 RN 6408-12-4 HCPLUS  
 CN Chromate(3-), bis[3-(hydroxy-κO)-4-[2-(hydroxy-κO)-3-[(2-methylphenyl)amino]carbonyl]-1-naphthalenyl]azo-κN1]-7-nitro-1-naphthalenesulfonato(3-)]-, disodium hydrogen (9CI) (CA INDEX NAME)

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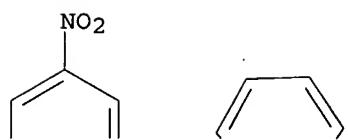
PAGE 3-A

NO<sub>2</sub>● H<sup>+</sup>● 2 Na<sup>+</sup>

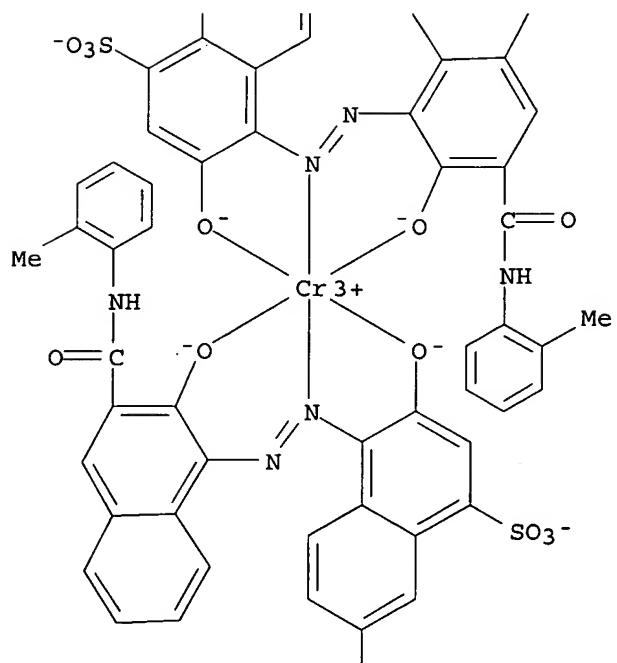
L84 ANSWER 41 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1991:515299 HCAPLUS  
 DOCUMENT NUMBER: 115:115299  
 TITLE: Scale inhibitors for polymerization reactors  
 INVENTOR(S): Watanabe, Mikio; Kaneko, Ichiro; Ueno, Susumu  
 PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03074406	A2	19910329	JP 1989-209829	19890814
PRIORITY APPLN. INFO.:			JP 1989-209829	19890814
ED	Entered STN:	23 Sep 1991		
AB	Coating of reactors for vinyl polymerization with inhibitors and alkaline earth compds. inhibits the adhesion of polymers. Thus, aqueous polymerization of butadiene with styrene in a reactor coated with C.I. Acid Black and Ca phosphate resulted in polymer scale adhesion 12 g/m <sup>2</sup> ; vs. 1150 without the coating.			
IT	6408-12-4, C.I. Acid Black 124			
RL	USES (Uses)	(scale inhibitors, for reactors for vinyl polymerization)		
RN	6408-12-4 HCAPLUS			
CN	Chromate(3-), bis[3-(hydroxy- $\kappa$ O)-4-[2-(hydroxy- $\kappa$ O)-3-[(2-methylphenyl)amino]carbonyl]-1-naphthalenyl]azo- $\kappa$ N1]-7-nitro-1-naphthalenesulfonato(3-)], disodium hydrogen (9CI) (CA INDEX NAME)			

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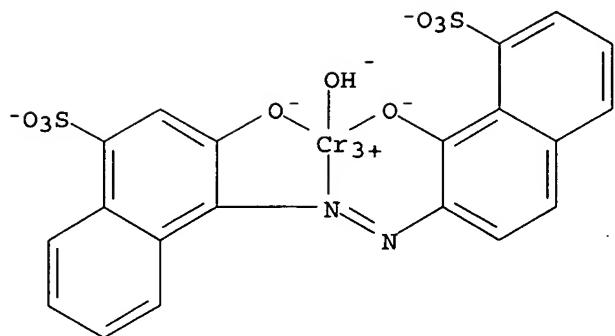
PAGE 3-A

NO<sub>2</sub>● H<sup>+</sup>● 2 Na<sup>+</sup>

L84 ANSWER 42 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1990:498279 HCPLUS  
 DOCUMENT NUMBER: 113:98279  
 TITLE: Scale-inhibitor coatings for olefin polymerization reactors and other equipment  
 INVENTOR(S): Shimizu, Toshihide; Kaneko, Ichiro; Watanabe, Mikio  
 PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02117902	A2	19900502	JP 1988-271557	19881027
JP 07039444	B4	19950501		

PRIORITY APPLN. INFO.: JP 1988-271557 19881027  
 ED Entered STN: 16 Sep 1990  
 AB The title coatings comprise a polycondensate of polyhydric phenols and pigments and/or dyes. Thus, a title coating was prepared in DMF containing a pyrogallol-benzaldehyde polycondensate and Solvent Black.  
 IT 6370-08-7, C.I. Acid Blue 158 12392-64-2, C.I. Acid Blue 161  
 RL: USES (Uses)  
 (scale-inhibitor coatings containing, for polymerization reactors)  
 RN 6370-08-7 HCPLUS  
 CN Chromate(2-), hydroxy[3-(hydroxy- $\kappa$ O)-4-[[1-(hydroxy- $\kappa$ O)-8-sulfo-2-naphthalenyl]azo- $\kappa$ N1]-1-naphthalenesulfonato(4-)]-, disodium, (T-4) - (9CI) (CA INDEX NAME)

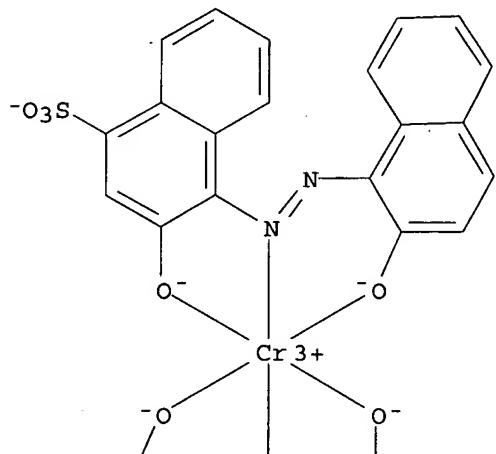


● 2  $\text{Na}^+$

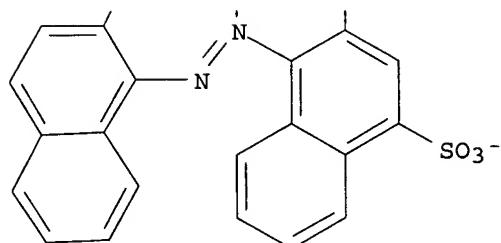
RN 12392-64-2 HCAPLUS

CN Chromate(3-), bis[3-hydroxy-4-[(2-hydroxy-1-naphthalenyl)azo]-1-naphthalenesulfonato(3-)], disodium hydrogen (9CI) (CA INDEX NAME)

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● H<sup>+</sup>● 2 Na<sup>+</sup>

L84 ANSWER 43 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1990:517017 HCPLUS

DOCUMENT NUMBER: 113:117017

TITLE: Allylamine polymer fixing agents for direct dyes

INVENTOR(S): Harada, Toru; Ueda, Toshio

PATENT ASSIGNEE(S): Nitto Boseki Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02080681	A2	19900320	JP 1988-230097	19880916
JP 07023589	B4	19950315		

PRIORITY APPLN. INFO.: JP 1988-230097 19880916

ED Entered STN: 29 Sep 1990

AB The title agents are homo- or copolymers of H<sub>2</sub>C:CHCH<sub>2</sub>NHR (R = H, C<sub>1</sub>-18 alkyl, substituted alkyl, aralkyl, cycloalkyl) or its salt. The agents produce comparable washing fastness and improved chlorine fastness without lowering light fastness compared with conventional fixing agents. Thus, a cotton cloth dyed with Sirius Supra Yellow GD and then dipped in an aqueous solution of poly(allylamine hydrochloride) was comparable in washing fastness to a control treated with dicyandiamide-diethylenetriamine condensate.

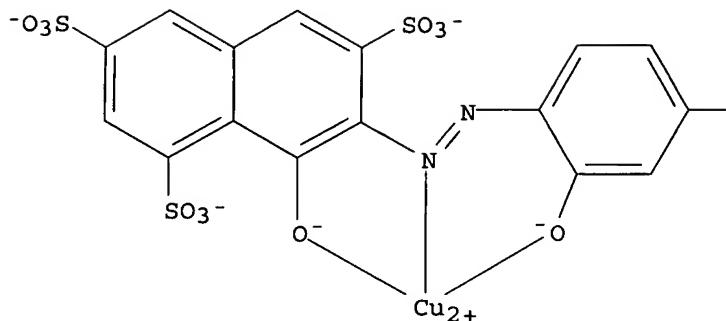
IT 71873-63-7, Sumilight Supra Blue FGL

RL: USES (Uses)  
(fixing agents for, allylamine polymers as)

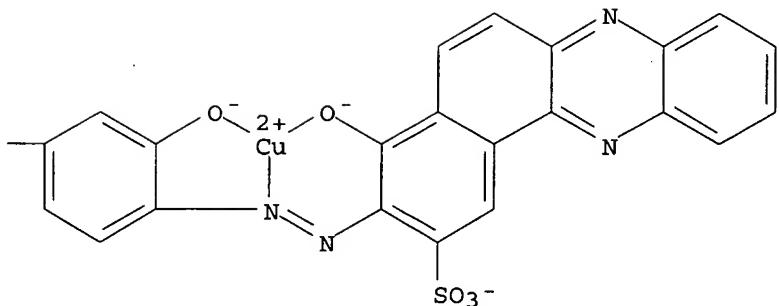
RN 71873-63-7 HCPLUS

CN Cuprate(4-), [μ-[7-[[3,3'-di(hydroxy-κO)-4'-[[4-(hydroxy-κO)-2-sulfonybenzo[a]phenazin-3-yl]azo-κN1][1,1'-biphenyl]-4-yl]azo-κN1]-8-(hydroxy-κO)-1,3,6-naphthalenetrisulfonato(8-)]]]di-, tetrasodium (9CI) (CA INDEX NAME)

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● 4 Na<sup>+</sup>

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L84 ANSWER#44 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1990:479291 HCAPLUS  
 DOCUMENT NUMBER: 113:79291  
 TITLE: Method for prevention of polymer deposition  
       on reactors during polymerization  
 INVENTOR(S): Shimizu, Toshihide; Kaneko, Ichiro; Watanabe, Mikio  
 PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02047106	A2	19900216	JP 1988-199124	19880810
JP 06015565	B4	19940302		

## PRIORITY APPLN. INFO.:

JP 1988-199124

19880810

ED Entered STN: 01 Sep 1990

AB Title method comprises (a) coating the reactor inner wall and other portions the monomers may contact in advance with an anionic dye solution having pH ≤ 7 and then with an cationic polymer and (b) carrying out the polymerization. Thus, the inner surfaces of a reactor were coated with a solution (pH 2.5) of C.I. Acid Black 2 in 70:30 water-MeOH and then with 0.5% aqueous solution of poly(vinylamine) at 50° and dried for 15 min. After 5 h polymerization of styrene and acrylonitrile at 90° in this reactor, no polymer scales were found, compared with 1200 g/m<sup>2</sup> polymer scale deposition without the coating.

IT 6408-12-4, C.I. Acid Black 124

RL: USES (Uses)

(coatings, for prevention of polymer scale deposition on reactors during polymerization of ethylenic monomers)

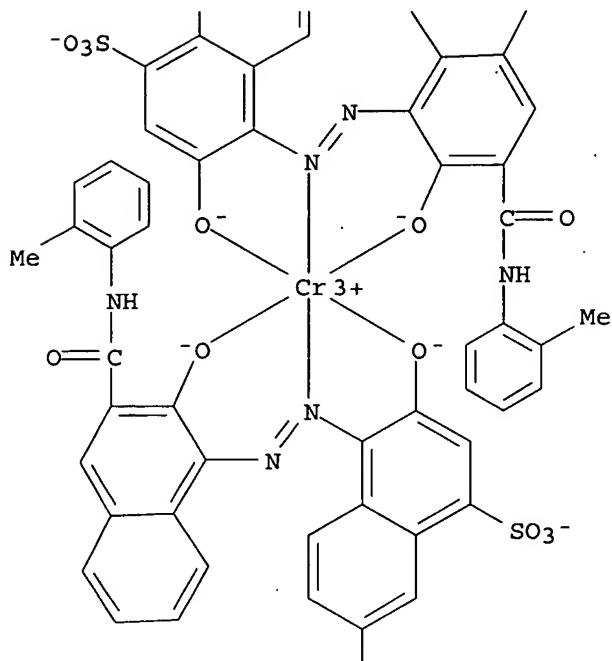
RN 6408-12-4 HCPLUS

CN Chromate(3-), bis[3-(hydroxy-κO)-4-[[2-(hydroxy-κO)-3-[[[(2-methylphenyl)amino]carbonyl]-1-naphthalenyl]azo-κN1]-7-nitro-1-naphthalenesulfonato(3-)]-, disodium hydrogen (9CI) (CA INDEX NAME)

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NO<sub>2</sub>● H<sup>+</sup>● 2 Na<sup>+</sup>

L84 ANSWER 45 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1990:573004 HCPLUS  
 DOCUMENT NUMBER: 113:173004  
 TITLE: Prevention of polymer scale formation  
 INVENTOR(S): Shimizu, Toshihide; Kaneko, Ichiro; Watanabe, Mikio  
 PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan  
 SOURCE: Eur. Pat. Appl., 16 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.

KIND DATE

APPLICATION NO.

DATE

searched by D. Arnold 571-272-2532

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EP 372968	A2	19900613	EP 1989-312779	19891207
EP 372968	A3	19911023		
EP 372968	B1	19941102		
R: DE, FR, GB				
JP 02155903	A2	19900615	JP 1988-309416	19881207
JP 07039445	B4	19950501		
US 5034478	A	19910723	US 1989-446699	19891206
JP 1988-309416 A 19881207				

## PRIORITY APPLN. INFO.:

ED Entered STN: 09 Nov 1990

AB Deposition of scale is prevented in **polymerization** vessels during **polymerization** of ethylenic monomers by coating the **polymerization** vessel inner wall with a solution comprising a condensate (A) of an OH group-containing phenolic compound,  $\geq 1$  compound from metal compds. and inorg. colloids, and  $\geq 1$  member from dyes and pigment. A stirred stainless steel **polymerization** vessel was coated with a 5% solution of A/Li silicate colloid/C.I. Acid Red 183 [100:100:100 (weight)] in MeOH, heated to 50° for 30 min, dried, and washed with H<sub>2</sub>O. In the vessel was introduced 400 kg H<sub>2</sub>O, 200 kg vinyl chloride, 200 g sorbitan monostearate, 200 g hydroxypropylmethyl cellulose and 15 g diisopropyl peroxydicarbonate and heated at 57° for 6 h with stirring. The **polymer** was removed and the inside of the vessel washed with H<sub>2</sub>O. Repeating the entire procedure (including applying the coating solution) gave the 25 **polymerization** runs repeatable before the quantity of scale on the inner wall was >1 g/m<sup>2</sup>.

IT 12392-64-2

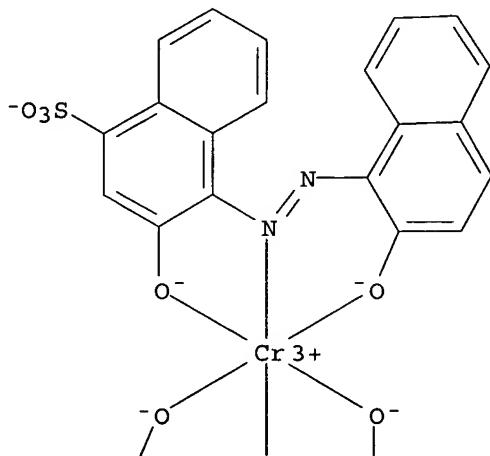
RL: USES (Uses)

(coatings containing, for scale prevention in **polymerizing** ethylenic monomers)

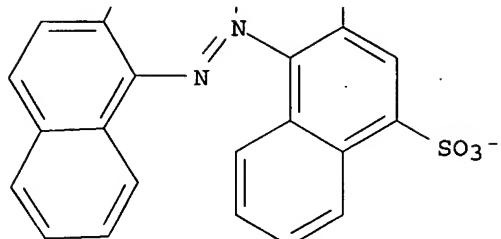
RN 12392-64-2 HCPLUS

CN Chromate(3-), bis[3-hydroxy-4-[(2-hydroxy-1-naphthalenyl)azo]-1-naphthalenesulfonato(3-)]-, disodium hydrogen (9CI) (CA INDEX NAME)

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● H<sup>+</sup>● 2 Na<sup>+</sup>

L84 ANSWER 146 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1990:534257 HCPLUS  
 DOCUMENT NUMBER: 113:134257  
 TITLE: Preventing scale deposition during polymerization of ethylenically unsaturated monomers  
 INVENTOR(S): Shimizu, Toshihide; Kaneko, Ichiro; Watanabe, Mikio  
 PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan  
 SOURCE: Eur. Pat. Appl., 15 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 358364	A2	19900314	EP 1989-308416	19890818
EP 358364	A3	19910605		
EP 358364	B1	19951018		
R: BE, DE, FR, GB, GR, IT, NL, SE				
ZA 8906061	A	19900530	ZA 1989-6061	19890809
NO 8903267	A	19900220	NO 1989-3267	19890815
NO 172988	B	19930628		
NO 172988	C	19931006		
AU 8939949	A1	19900222	AU 1989-39949	19890815
AU 612883	B2	19910718		
RO 105288	B1	19950803	RO 1989-141301	19890816
DD 300292	A7	19920604	DD 1989-331876	19890817
DK 8904067	A	19900220	DK 1989-4067	19890818
FI 8903909	A	19900220	FI 1989-3909	19890818
FI 96213	B	19960215		
FI 96213	C	19960527		

CN 1040596	A	19900321	CN 1989-106490	19890818
BR 8904171	A	19900410	BR 1989-4171	19890818
HU 51302	A2	19900428	HU 1989-4244	19890818
HU 207105	B	19930301		
JP 02138303	A2	19900528	JP 1989-212483	19890818
JP 06055769	B4	19940727		
ES 2017406	A6	19910201	ES 1989-2897	19890818
PL 161850	B1	19930831	PL 1989-281088	19890818
CA 1330683	A1	19940712	CA 1989-608837	19890818
RU 2019546	C1	19940915	RU 1989-4614857	19890818
US 5034477	A	19910723	US 1990-512595	19900424
PRIORITY APPLN. INFO.:			JP 1988-207185	A 19880819
			US 1989-395584	B1 19890818

OTHER SOURCE(S): MARPAT 113:134257

ED Entered STN: 13 Oct 1990

AB Coatings for polymerization reactors for prevention of polymer scale deposition comprise (a) specific anionic dyes or alkali metal or ammonium salts of sulfonated condensates of aniline (or derivs.) and nitrobenzene (or derivs.) and (b) specific cationic dyes having pH >7. A typical coating, prepared in aqueous MeOH and adjusted to pH 9 with ethylenediamine, comprised a 1:2 mixture of sulfonated PhNH<sub>2</sub>-PhNO<sub>2</sub> condensate Na salt and C.I. Solvent Black 3. With this composition applied to the reactor walls, no polymer scale adhered during PVC manufacture

IT 6408-12-4, C.I. Acid Black 124

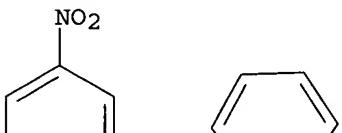
RL: USES (Uses)

(antiscaling coatings, containing cationic dyes, for vinyl polymer reactors)

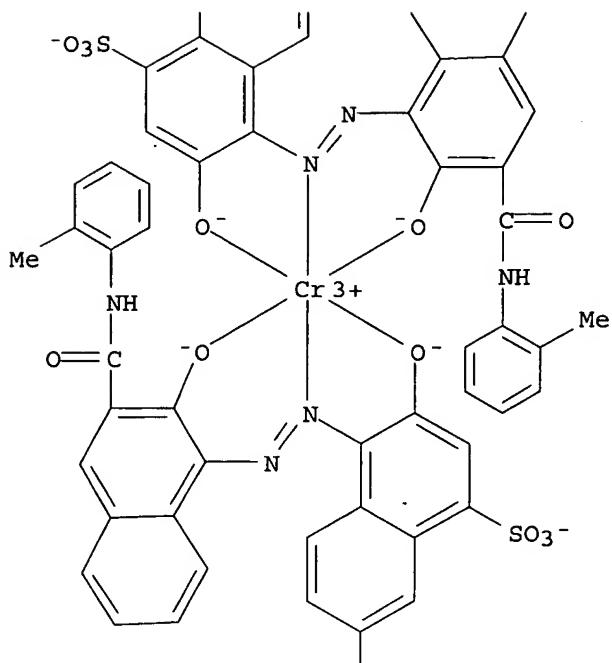
RN 6408-12-4 HCPLUS

CN Chromate(3-), bis[3-(hydroxy-κO)-4-[[2-(hydroxy-κO)-3-[[[(2-methylphenyl)amino]carbonyl]-1-naphthalenyl]azo-κN1]-7-nitro-1-naphthalenesulfonato(3-)]-, disodium hydrogen (9CI) (CA INDEX NAME)

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NO<sub>2</sub>● H<sup>+</sup>● 2 Na<sup>+</sup>

L84 ANSWER 47 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1990:553278 HCPLUS  
 DOCUMENT NUMBER: 113:153278  
 TITLE: Scale-inhibiting aqueous-organic coatings for the walls of addition polymerization reactors  
 INVENTOR(S): Shimizu, Toshihide; Kaneko, Ichiro; Watanabe, Mikio  
 PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan  
 SOURCE: Eur. Pat. Appl., 21 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 355575	A2	19900228	EP 1989-114679	19890808
EP 355575	A3	19910612		
EP 355575	B1	19941102		
R: BE, DE, FR, GB, GR, IT, NL, SE				
JP 02047103	A2	19900216	JP 1988-199119	19880810
JP 06074284	B4	19940921		
JP 02047104	A2	19900216	JP 1988-199120	19880810
JP 06015564	B4	19940302		
DK 8903877	A	19900211	DK 1989-3877	19890808
NO 8903179	A	19900430	NO 1989-3179	19890808
NO 173702	B	19931011		
NO 173702	C	19940119		
FI 8903766	A	19900211	FI 1989-3766	19890809
FI 96212	B	19960215		
FI 96212	C	19960527		
AU 8939462	A1	19900215	AU 1989-39462	19890809
AU 612873	B2	19910718		
CN 1040206	A	19900307	CN 1989-105545	19890809
CN 1035057	B	19970604		
BR 8904004	A	19900320	BR 1989-4004	19890809
ZA 8906060	A	19900530	ZA 1989-6060	19890809
HU 53142	A2	19900928	HU 1989-4081	19890809
HU 209139	B	19940328		
ES 2018383	A6	19910401	ES 1989-2830	19890809
CS 274701	B2	19910915	CS 1989-4744	19890809
DD 299593	A7	19920430	DD 1989-331614	19890809
US 5196164	A	19930323	US 1989-391199	19890809
PL 161849	B1	19930831	PL 1989-280970	19890809
CA 1323464	A1	19931019	CA 1989-607875	19890809
KR 137661	B1	19980430	KR 1989-11317	19890809
IN 176581	A	19960803	IN 1989-DE736	19890818
US 5298220	A	19940329	US 1993-703	19930105
PRIORITY APPLN. INFO.:			JP 1988-199119	A 19880810
			JP 1988-199120	A 19880810
			US 1989-391199	A3 19890809

ED Entered STN: 27 Oct 1990

AB Scale formation is inhibited on the walls of addition **polymerization** reactors by coating the reactor's walls with an aqueous composition (pH of  $\pm 7.0$ )

containing a water-soluble anionic dye and  $\geq 1$  of water-insol. cationic dyes and/or water-insol. N-containing organic compds. After drying, the **polymerization** is conducted and wall scale formation is not observed. Thus, the walls of a **polymerization** reactor were coated with a solution containing water, acetone, C.I. Acid Black 2 (I), C.I. Solvent Black 22 (II), and the solution pH adjusted to 2.5 with phytic acid, at I/II weight ratio 100/20 and water/acetone weight ratio 100/10. After wall drying, vinyl chloride was **polymerized** in the reactor producing 2 g/m<sup>2</sup> scale fromation, vs. 1200 g/m<sup>2</sup> for a controlled **polymerization** conducted in the reactor whose walls were not coated with the composition

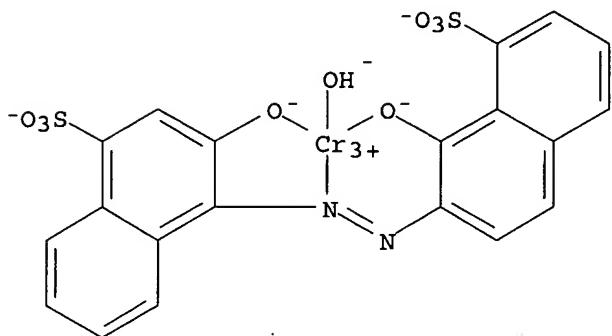
IT 6370-08-7, C.I. Acid Blue 158 6408-12-4, C.I. Acid Black 124

RL: USES (Uses)  
 (scale-inhibiting coatings containing, for addition **polymerization** reactor walls)

RN 6370-08-7 HCAPLUS

CN Chromate(2-), hydroxy[3-(hydroxy- $\kappa$ O)-4-[[1-(hydroxy- $\kappa$ O)-8-

sulfo-2-naphthalenyl]azo- $\kappa$ N1]-1-naphthalenesulfonato(4-)]-,  
disodium, (T-4) - (9CI) (CA INDEX NAME)

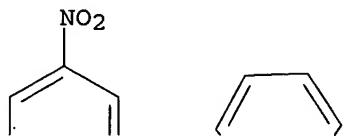


● 2 Na<sup>+</sup>

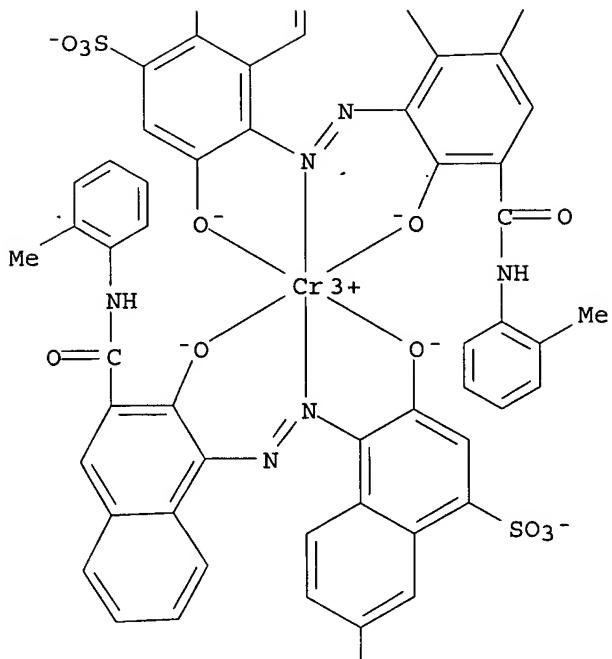
RN 6408-12-4 HCPLUS

CN Chromate(3-), bis[3-(hydroxy-κO)-4-[[2-(hydroxy-κO)-3-[(2-methylphenyl)amino]carbonyl]-1-naphthalenyl]azo-κN1]-7-nitro-1-naphthalenesulfonato(3-)]-, disodium hydrogen (9CI) (CA INDEX NAME)

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NO<sub>2</sub>● H<sup>+</sup>● 2 Na<sup>+</sup>

L84 ANSWER 48 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1989:633898 HCPLUS  
 DOCUMENT NUMBER: 111:233898  
 TITLE: Methods of preventing polymer scale formation  
 INVENTOR(S): Shimizu, Toshihide; Kaneko, Ichiro; Watanabe, Mikio  
 PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan  
 SOURCE: Eur. Pat. Appl., 23 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 320227	A2	19890614	EP 1988-311573	19881207
EP 320227	A3	19901010		
EP 320227	B1	19940907		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
CA 1289297	A1	19910917	CA 1988-584869	19881202
AU 8826614	A1	19890608	AU 1988-26614	19881206
AU 608671	B2	19910411		
US 4933399	A	19900612	US 1988-281039	19881207
ES 2058313	T3	19941101	ES 1988-311573	19881207
KR 135290	B1	19980423	KR 1988-16248	19881207
CN 1035118	A	19890830	CN 1988-109232	19881208
CN 1023324	B	19931229		
JP 02138302	A2	19900528	JP 1988-310913	19881208
JP 06051731	B4	19940706		
<u>PRIORITY APPLN. INFO.:</u>				
			JP 1987-311528	A 19871208
			JP 1988-199122	A 19880810
			JP 1988-199123	A 19880810
			JP 1988-210341	A 19880824
			JP 1988-210342	A 19880824

ED Entered STN: 23 Dec 1989

AB The title method, in polymerization vessel of ethylenically unsatd. monomer, comprises coating vessel inner wall with a coating solution comprising cationic dye and another coating solution comprising ≥1 component selected from anionic polymeric compds., amphoteric polymeric compound, and hydroxy-containing organic compound. A polymn vessel and parts coated with 0.5% CI Solvent Black 5 in MeOH solution and with 1.0% aqueous gelatin solution, after drying, was used to polymerize styrene with acrylonitrile for 5 h at 90°; the vessel having scale sticking 0 g/m<sup>2</sup>, vs. 1200 without the coatings.

IT 6408-12-4, C.I. Acid Black 124

RL: USES (Uses)

(coating solns., for polymerization vessels,, for prevention of scale)

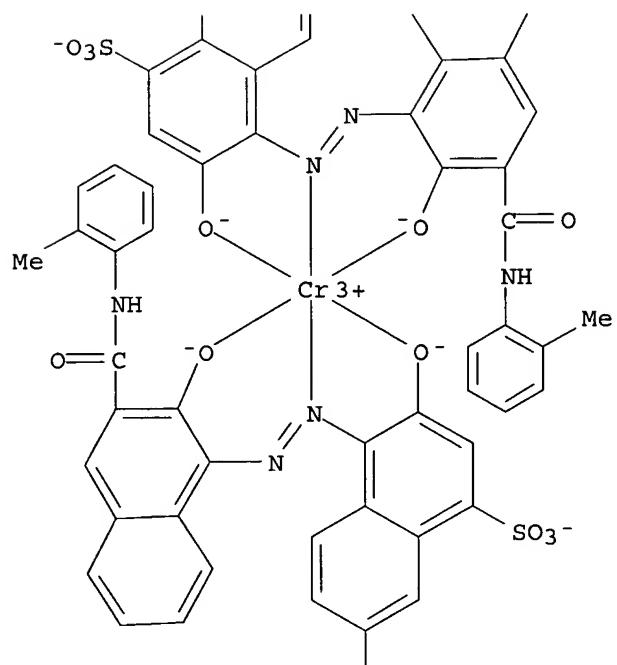
RN 6408-12-4 HCPLUS

CN Chromate(3-), bis[3-(hydroxy-κO)-4-[ [2-(hydroxy-κO)-3-[ [(2-methylphenyl)amino]carbonyl]-1-naphthalenyl]azo-κN1]-7-nitro-1-naphthalenesulfonato(3-)]-, disodium hydrogen (9CI) (CA INDEX NAME)

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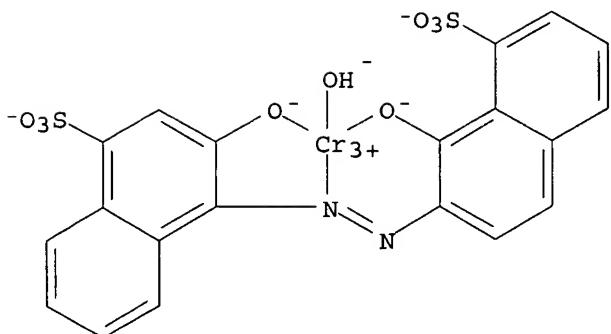


PAGE 3-A

NO<sub>2</sub>● H<sup>+</sup>● 2 Na<sup>+</sup>

L84 ANSWER 49 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1989:193593 HCAPLUS  
 DOCUMENT NUMBER: 110:193593  
 TITLE: Scale inhibition in manufacture of vinyl polymers  
 INVENTOR(S): Shimizu, Toshihide; Kaneko, Ichiro; Shimakura, Yoshiteru; Watanabe, Mikio  
 PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63156803	A2	19880629	JP 1986-303008	19861219
JP 01029486	B4	19890612		
PRIORITY APPN/ INFO.: ED Entered STN: 26 May 1989			JP 1986-303008	19861219
AB The vinyl polymers are prepared by coating pH ≥ 7 solns. containing alkali metal or NH <sub>4</sub> <sup>+</sup> salts of sulfonic or carboxylic dyes, and hydroxyaroms. on reactors before polymerization. Thus, coating a 0.5% 1:1 H <sub>2</sub> O-MeOH solution (pH 2.5) of 100:20 C.I. Acid Blue 158-catechol and phytic acid on the interior wall of a reactor, drying, and polymg CH <sub>2</sub> :CHCl in the reactor gave PVC and showed no scale adherence, vs. 1400 g/m <sup>2</sup> without the coating.				
IT 6370-08-7, C.I. Acid blue 158 RL: USES (Uses) (coatings containing aromatic alcs. and, scale inhibitors, for polymn . of vinyl compds.)				
RN	6370-08-7 HCAPLUS			
CN	Chromate(2-), hydroxy[3-(hydroxy-κO)-4-[[1-(hydroxy-κO)-8-sulfo-2-naphthalenyl]azo-κN1]-1-naphthalenesulfonato(4-)]-, disodium, (T-4)- (9CI) (CA INDEX NAME)			



●2  $\text{Na}^+$

L84 ANSWER 50 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1989:77610 HCPLUS  
 DOCUMENT NUMBER: 110:77610  
 TITLE: Manufacture of metal-complex pigment compositions for organic polymers and lacquers  
 INVENTOR(S): Lienhard, Paul; Tanner, Martin; Bugnon, Philippe  
 PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.  
 SOURCE: Eur. Pat. Appl., 49 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 278913	A2	19880817	EP 1988-810073	19880208
EP 278913	A3	19910605		
R: DE, FR, GB, IT				
JP 63202669	A2	19880822	JP 1988-30671	19880212
PRIORITY APPLN. INFO.:			CH 1987-521	A 19870212

OTHER SOURCE(S): MARPAT 110:77610

ED Entered STN: 04 Mar 1989

AB Pigment prepns. contain (A) a yellow, orange, red, brown, or violet metal-complex pigment, and (B) an anionic or cationic derivative of the metal-complex pigment at A:B = 99-80:1-20. These compns. are useful for coloring high mol. weight organic materials, and, when incorporated in lacquers,

have good rheol. properties. A 10% aqueous solution (600 g) of I as a 1:1-Cu complex was heated at 70-75°, and 3 g II as a 1:1 Cu complex added, the mixture was heated for 30 min, stirred, 0.8 g  $\text{CaCl}_2$  in 20 mL  $\text{H}_2\text{O}$  added, the mixture stirred for 30 min at 70-75°, and the product filtered, washed, and dried in vacuum at 80°. After sieving, an olive-colored powder was obtained, which was useful in the manufacture of a transparent yellow lacquer.

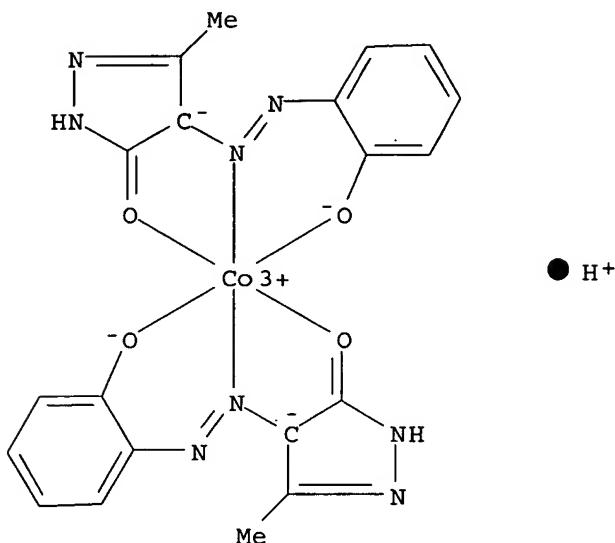
IT 118439-15-9P

RL: PREP (Preparation)

(manufacture of pigment compns. containing, for organic polymers)

RN 118439-15-9 HCPLUS

CN Cobaltate(1-), bis[2,4-dihydro-4-[(2-hydroxyphenyl)azo]-5-methyl-3H-pyrazol-3-onato(2-)]-, hydrogen (9CI) (CA INDEX NAME)



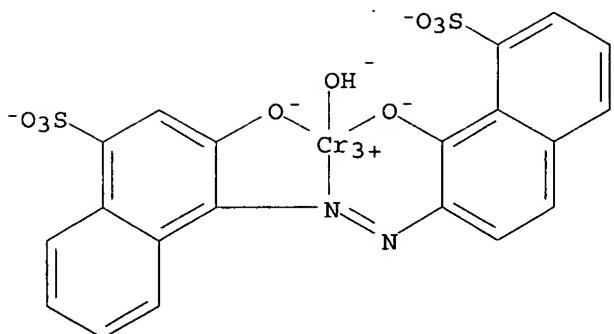
L84 ANSWER 51 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1987:459689 HCPLUS  
 DOCUMENT NUMBER: 107:59689  
 TITLE: Agents and methods for preventing the adhesion of polymer scales  
 INVENTOR(S): Shimizu, Toshihide; Kaneko, Ichiro; Watanabe, Mikio  
 PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 62018402	A2	19870127	JP 1985-156325	19850716
JP 06080084	B4	19941012		

PRIORITY APPLN. INFO.: JP 1985-156325, 19850716  
 ED Entered STN: 21 Aug 1987  
 AB Polymer scale preventing agents are aromatic amine-quinone condensates, optionally containing alkali metal or ammonium salts of sulfonic acids or carboxylic acids having >5 conjugated  $\pi$  bonds. Thus, 2-amino diphenylamine-p-benzoquinone condensate was prepared and used as a scale preventing agent in polymerization of vinyl chloride.

IT 6370-08-7, C.I. Acid Blue 158  
 RL: USES (Uses)  
 (scale inhibitors, containing aromatic amines-quinone condensates, for vinyl polymerization)  
 RN 6370-08-7 HCPLUS  
 CN Chromate(2-), hydroxy [3-(hydroxy- $\kappa$ O)-4-[[1-(hydroxy- $\kappa$ O)-8-sulfo-2-naphthalenyl]azo- $\kappa$ N1]-1-naphthalenesulfonato(4-)]-, disodium, (T-4) - (9CI) (CA INDEX NAME)



● 2  $\text{Na}^+$

L84 ANSWER 52 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1988:6761 HCPLUS

DOCUMENT NUMBER: 108:6761

TITLE: Effects of added metal ions on the interaction between polyvinylpyrrolidone and azo dyes carrying hydroxyl groups

AUTHOR(S): Takagishi, Toru; Matsui, Naoki

CORPORATE SOURCE: Coll. Eng., Univ. Osaka Prefect., Osaka, 591, Japan

SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (1987), 25(9), 2511-20

CODEN: JPACEC; ISSN: 0887-624X

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 09 Jan 1988

AB The extent of binding of chrome violet by poly(vinylpyrrolidone) was markedly enhanced in the presence of  $\text{Co}^{2+}$  ion.  $\text{Ni}^{2+}$  and  $\text{Zn}^{2+}$  ions did not perceptively influence the binding affinity of the dye.  $\text{Cu}^{2+}$  ion, in contrast, suppressed the binding. To investigate further the action of added metal ions, a cobalt complex dye was prepared and its binding property for the polymer was compared to that of chrome violet in the presence of metal ions. Some possible mechanisms for the enhancement of chrome violet binding by the addition of  $\text{Co}^{2+}$  ion were described.

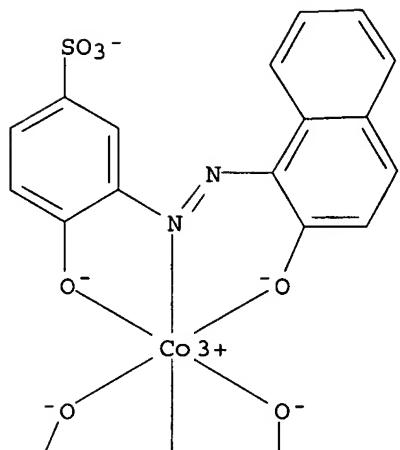
IT 111920-51-5

RL: PRP (Properties)  
(binding of, by poly(vinylpyrrolidone), metal ion effect on)

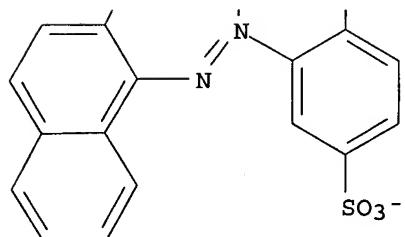
RN 111920-51-5 HCPLUS

CN Cobaltate(3-), bis[4-hydroxy-3-[(2-hydroxy-1-naphthalenyl)azo]benzenesulfonato(3-)]-, trihydrogen (9CI) (CA INDEX NAME)

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● 3 H<sup>+</sup>

L84 ANSWER 53 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1983:471333 HCPLUS

DOCUMENT NUMBER: 99:71333

TITLE: Preventing deposition of polymer scale during polymerization of a vinyl monomer

INVENTOR(S): Shimizu, Toshihide; Furukawa, Yasuo; Kaneko, Ichiro

PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan

SOURCE: PCT Int. Appl., 34 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 8301452	A1	19830428	WO 1982-JP414	19821019
W: NO, SU, US RW: BE, DE, FR, GB, NL				
JP 58069203	A2	19830425	JP 1981-167699	19811020
JP 01038121	B4	19890811		
IN 157818	A	19860628	IN 1982-CA1206	19821015
EP 91965	A1	19831026	EP 1982-903059	19821019
EP 91965	B1	19870318		
R: BE, DE, FR, GB, NL				
NO 8302086	A	19830609	NO 1983-2086	19830609
NO 158022	B	19880321		
NO 158022	C	19880629		
US 4612354	A	19860916	US 1985-764508 JP 1981-167699 WO 1982-JP414 US 1983-514810	19850809 A 19811020 A 19821019 A1 19830614
PRIORITY APPLN. INFO.:				

ED Entered STN: 12 May 1984

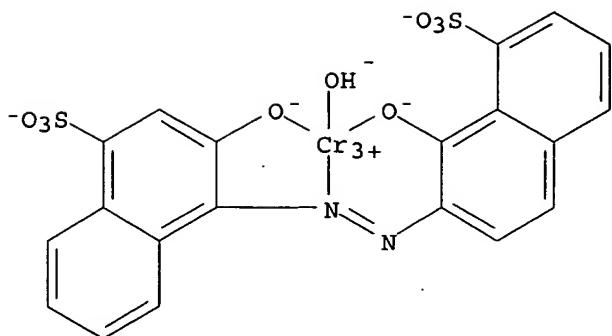
AB Formation of **polymer** scale during suspension **polymerization** of vinyl compds. is prevented by coating the inside surfaces of **polymerization** reactors with aqueous solns. of sulfonic acid- or carboxylic acid salt-type dyes or salts of organic sulfonic acids or carboxylic acids having at least one pair of conjugated double bonds and poly(vinyl alc.) (I) [9002-89-5] and drying. Thus, a stainless steel reactor was coated on the interior with an aqueous solution containing 0.5% C.I. Acid Black 2 [8005-03-6] and 0.08% I, dried 1 min at 90° to form a 0.1 g/m<sup>2</sup> coating, and washed with H<sub>2</sub>O. A mixture of partially saponified poly(vinyl acetate) 150, methylcellulose 50, H<sub>2</sub>O 500,000, vinyl chloride 250,000, and dilauroyl peroxide 500 g was stirred in the above reactor at 50° for 10 h to give PVC [9002-86-2] without formation of scale.

IT 6370-08-7

RL: USES (Uses)  
(scale prevention by poly(vinyl alc.) and, in suspension **polymn** of vinyl compds.)

RN 6370-08-7 HCPLUS

CN Chromate(2-), hydroxy[3-(hydroxy- $\kappa$ O)-4-[[1-(hydroxy- $\kappa$ O)-8-sulfo-2-naphthalenyl]azo- $\kappa$ N1]-1-naphthalenesulfonato(4-)]-, disodium, (T-4) - (9CI) (CA INDEX NAME)

● 2 Na<sup>+</sup>

L84 ANSWER 54 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1984:121777 HCPLUS

DOCUMENT NUMBER: 100:121777

TITLE: Preventing scale deposition in the polymerization of ethylenically unsaturated monomers

INVENTOR(S): Shimizu, Toshihide; Furukawa, Yasuo; Kaneko, Ichiro

PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 45 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 96319	A1	19831221	EP 1983-105292	19830527
EP 96319	B1	19860326		
R: BE, DE, FR, GB, IT, NL				
JP 58210902	A2	19831208	JP 1982-92415	19820531
JP 61052161	B4	19861112		
CA 1222347	A1	19870526	CA 1983-429144	19830530
PRIORITY/APPN. INFO.: ED Entered STN: 12 May 1984			JP 1982-92415 A	19820531

AB Polymer scale buildup on the reactor walls in the polymn

of ethylenically unsatd. monomers is prevented by coating the inner surfaces of the reactor with an aqueous coating composition comprising an organic dye

of sulfonic or carboxylic acid in the form of an alkali metal or ammonium salt and an aqueous colloidal dispersion of an inorg. material. Thus, the inner surfaces and the stirrer of a stainless steel reactor were coated with an aqueous solution of 0.5% C. I. Acid Black 2 [8005-03-6] containing

1.0%

colloidal Fe(OH)<sub>3</sub> to give 0.2 g coating/m<sup>2</sup>. A mixture of partially saponified poly(vinyl alc.) 150, hydroxypropyl methyl cellulose 50, and bis(2-ethylhexyl) peroxydicarbonate [16111-62-9] 100 g in 500 kg water and 250 kg vinyl chloride was heated at 50° for 10 h in the coated reactor. No scale deposition was observed after completion of the

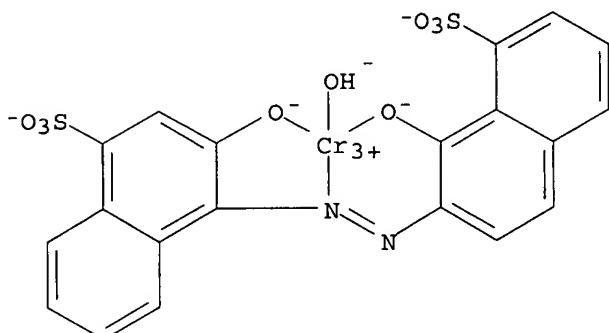
**polymerization** However, 200 g/cm<sup>2</sup> scale was deposited on the noncoated reactor using a similar coating composition not containing Fe(OH)<sub>3</sub>.

IT 6370-08-7

RL: USES (Uses)

(coatings, for scale prevention in vinyl **polymerization**)

RN 6370-08-7 HCAPLUS

CN Chromate(2-), hydroxy[3-(hydroxy- $\kappa$ O)-4-[[1-(hydroxy- $\kappa$ O)-8-sulfo-2-naphthalenyl]azo- $\kappa$ N1]-1-naphthalenesulfonato(4-)]-, disodium, (T-4) - (9CI) (CA INDEX NAME)● 2 Na<sup>+</sup>

L84 ANSWER 55 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1980:59424 HCAPLUS

DOCUMENT NUMBER: 92:59424

TITLE: Prevention of scale formation during suspension **polymerization** of vinyl compounds

INVENTOR(S): Koyanagi, Shunichi; Hasegawa, Niichiro; Shimizu, Toshihide; Kaneko, Ichiro; Katsushima, Sensaku

PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 54119584	A2	19790917	JP 1978-27063	19780309
JP 58011884	B4	19830305		

PRIORITY APPLN. INFO.: JP 1978-27063 A 19780309

ED Entered STN: 12 May 1984

AB The interiors of **polymerization** reactors for vinyl compds. are coated with solns. of polar organic compds. having conjugated double bonds in organic solvents and further coated with aqueous solns. of such compds. at pH <7 to prevent scale formation during **polymerization**. Thus, the interior of a stainless steel autoclave is coated with a 0.5% C.I. Solvent Black 7 (I) [8005-02-5] in MeOH, dried, washed with H<sub>2</sub>O, coated with 0.1% aqueous 100:30 C.I. Acid Black 2 [8005-03-6]-C.I. Basic Orange 14 [65-61-2] adjusted to pH 2.5, dried, and washed with H<sub>2</sub>O. A mixture of vinyl chloride 26, H<sub>2</sub>O 52,

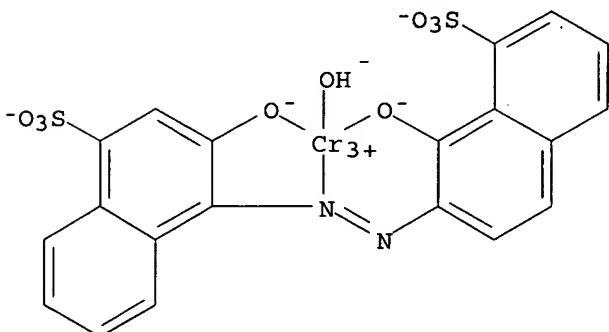
poly(vinyl alc.) 0.026, and radical initiator 0.008 kg was stirred 10 h at 57° to give PVC [9002-86-2]. The reactor was used for >30 runs without scale formation, compared with 4 when coated with I alone.

IT 6370-08-7

RL: USES (Uses)

(scale prevention by, on reactors for suspension polymerization)

RN 6370-08-7 HCPLUS

CN Chromate(2-), hydroxy[3-(hydroxy- $\kappa$ O)-4-[[1-(hydroxy- $\kappa$ O)-8-sulfo-2-naphthalenyl]azo- $\kappa$ N1]-1-naphthalenesulfonato(4-)]-, disodium, (T-4) - (9CI) (CA INDEX NAME)● 2 Na<sup>+</sup>

L84 ANSWER 56 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1978:144345 HCPLUS

DOCUMENT NUMBER: 88:144345

TITLE: Ferromagnetic toner

INVENTOR(S): Gorondy, Emery John

PATENT ASSIGNEE(S): du Pont de Nemours, E. I., and Co., USA

SOURCE: Ger. Offen., 83 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2714414	A1	19771013	DE 1977-2714414	19770331
DE 2714414	B2	19800828		
DE 2714414	C3	19810416		
US 4105572	A	19780808	US 1976-672554	19760331
PRIORITY APPLN. INFO.:			US 1976-672554	A 19760331

ED Entered STN: 12 May 1984

AB A ferromagnetic toner for a magnetic printing process is composed of  $\geq 1$  ferromagnetic component,  $\geq 1$  dye and/or a chemical processing agent, and a readily meltable, water-soluble or water-insol. resin which encapsulates the above-mentioned materials. Thus, a dispersion containing a 20% aqueous alkaline solution of a polyvinyl acetate copolymer resin 450, Fe 108, Fe3O4 108, a dispersion of C. I. Disperse Blue 56 24 in water 455, and water 500 parts was mixed and then spray-dried to give toner particles

with a particle size of 2-100  $\mu$ . The toner particles were then sieved with a sieve having 75  $\mu$  openings, and SiO<sub>2</sub> 0.2% added to improve the flow properties of the toner. An aluminized polyester foil carrying an overcoating of magnetic CrO<sub>2</sub> was then imagewise flash-exposed to demagnetize the CrO<sub>2</sub> in the nonimage areas, and the latent magnetic image was then developed by using the toner powder. The image was electrostatically transferred to a paper or textile support and fixed thereon by heat and pressure.

IT 50525-57-0

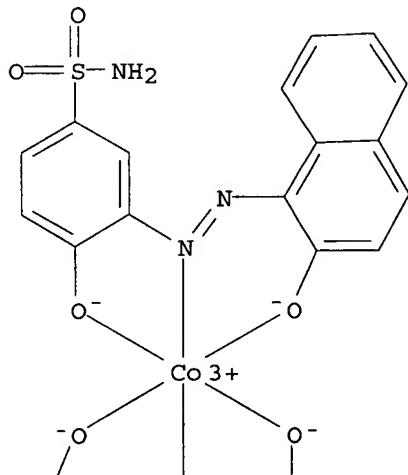
RL: USES (Uses)

(ferromagnetic toner containing magnetic particle, polymer binder, and, for magnetic copying process with subsequent image transfer)

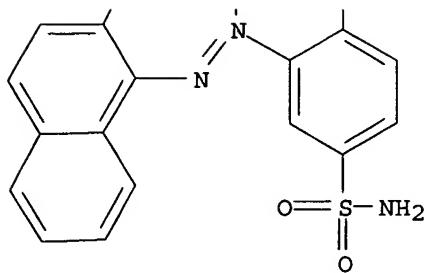
RN 50525-57-0 HCPLUS

Cobaltate(1-), bis[4-(hydroxy- $\kappa$ O)-3-[[2-(hydroxy- $\kappa$ O)-1-naphthalenyl]azo- $\kappa$ N1]benzenesulfonamidato(2-)]-, hydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

● H<sup>+</sup>

L84 ANSWER 57 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1977:157000 HCPLUS

DOCUMENT NUMBER: 86:157000

TITLE: Diffusion of some dyes in aqueous polymer solutions

AUTHOR(S): Farag, Ahmed A.; Sedahmed, G. H.; Farag, H. A.; Nagawi, A. F.

CORPORATE SOURCE: Chem. Eng. Dep., Alexandria Univ., Alexandria, Egypt

SOURCE: British Polymer Journal (1976), ,8(2), 54-7

CODEN: BPOJAB; ISSN: 0007-1641

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 12 May 1984

AB The diffusion of Direct Blue 76 [16143-79-6] and C.I. Acid Orange 7 in dilute solns. of polyacrylamide [9003-05-8], poly(ethylene oxide) [25322-68-3], and CM-cellulose [9004-32-4] was studied by the capillary method. The diffusion coeffs. in solns. containing CM-cellulose and polyacrylamide were higher and lower, resp., than those in pure H<sub>2</sub>O. In poly(ethylene oxide)-containing solns. the diffusion coeffs. of the direct and acid dye were lower and higher, resp., than those in pure H<sub>2</sub>O. The diffusion coeffs. of both dyes in poly(ethylene oxide) and polyacrylamide solns. decreased with increasing polymer concentration whereas in CM-cellulose solns. the diffusion coeffs. increased with increase in polymer concentration. The diffusion coeffs. of both dyes in all solns. obeyed the Arrhenius equation.

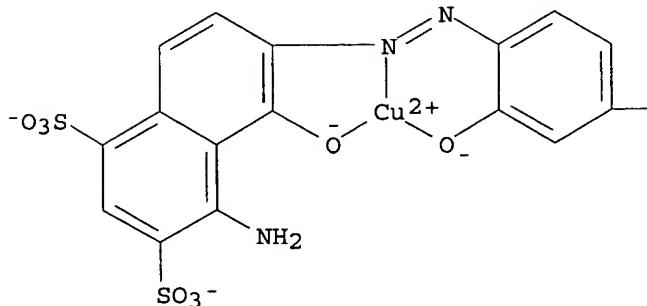
IT 16143-79-6

RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(diffusion of, in aqueous polymer solns.)

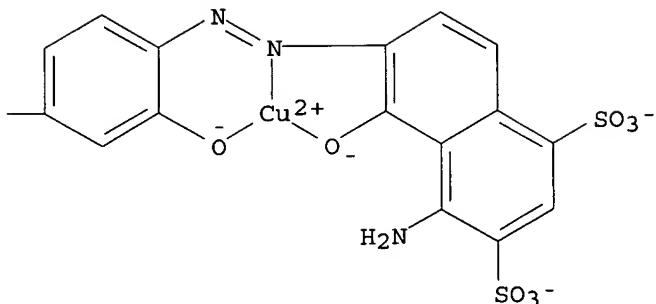
RN 16143-79-6 HCPLUS

CN Cuprate(4-), [ $\mu$ -[[6,6'-[[3,3'-di(hydroxy- $\kappa$ O)[1,1'-biphenyl]-4,4'-diyl]bis(azo- $\kappa$ N1)]bis[4-amino-5-(hydroxy- $\kappa$ O)-1,3-naphthalenedisulfonato]](8-)]di-, tetrasodium (9CI) (CA INDEX NAME)

PAGE 1-A

● 4 Na<sup>+</sup>

PAGE 1-B



L84 ANSWER 58 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1974:132760 HCPLUS  
 DOCUMENT NUMBER: 80:132760  
 TITLE: Catalytic mono- and cooligomerization of olefins  
 INVENTOR(S): Mix, Hermann; Kurras, Erhard; Wilcke, Friedrich W.; Reihsig, Jonathan; Schulz, Wolfgang; Fuhrmann, Hans; Grassert, Ingrid; Fuchs, Wilfried; Meissner, Jochen Ger. (East), 30 pp.  
 SOURCE: CODEN: GEXXA8  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DD 99556	Z	19730820	DD 1970-149546	19700817
PRIORITY APPLN. INFO.: /			DD 1970-149546	A1 19700817
ED Entered STN: 12 May 1984				
AB Olefins were oligomerized (predominantly dimerized) or codimerized over				

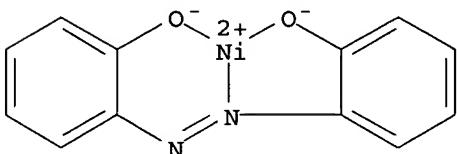
catalysts composed of Et<sub>2</sub>ClAl-EtCl<sub>2</sub>Al and a Ni complex of an aldimine or azo compound with other complexing atoms to permit a bi-, tri- or tetradeятate chelate. Thus, propene was passed into 100 ml absolute PhCl containing 60 mg bis(salicylaldimino)nickel at 0° until the solution was propene-saturated, then 1.13 ml. Et<sub>2</sub>ClAl-EtCl<sub>2</sub>Al was added dropwise and, after 30 min stirring at <20°, 3 ml concentrate KOH was added to give 49 g product of which 42 g was hexene (39.1% n-hexene) and 7 g was nonene.

IT 17835-75-5

RL: CAT (Catalyst use); USES (Uses)  
(catalysts, for oligomerization and codimerization of olefins)

RN 17835-75-5 HCPLUS

CN Nickel, bis[[2,2'-azobis[phenolato]](2-) -N,O,O']- (9CI) (CA INDEX NAME)



L84 ANSWER 59 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1969:525946 HCPLUS

DOCUMENT NUMBER: 71:125946

TITLE: Reaction of acid metal-complex dyes and poly(vinyl alcohol)

AUTHOR(S): Dergacheva, L. A.; Kharkharov, A. A.; Kalontarov, I. Ya.; Kopitsya, N. I.; Rakitin, I. I.

CORPORATE SOURCE: Inst. Khim., Dushanbe, USSR

SOURCE: Doklady Akademii Nauk Tadzhikskoi SSR (1969), 12(4), 32-6

CODEN: DANTAL; ISSN: 0002-3469

DOCUMENT TYPE: Journal

LANGUAGE: Russian

ED Entered STN: 12 May 1984

AB The reactions of several metal-complex dyes of the general formulas I and II with poly(vinyl alc.) (III) were studied by ir spectroscopy, E.P.R. spectroscopy, and physicochem. anal. Absorption bands obtained from I(R = SO<sub>3</sub>Na) (IV) and II(R<sub>1</sub> = Cl, R<sub>2</sub> = H, R<sub>3</sub> = SO<sub>2</sub>NH<sub>2</sub>, M = Co) (V) indicated that introduction of III brought about changes in the spectra of dyes similar to those caused by EtOH, i.e., a minor bathochromic shift as the concentration of EtOH increased. Introduction of IV, I(R = H), II(R<sub>1</sub> = SO<sub>2</sub>NH<sub>2</sub>, R<sub>2</sub> = NHAc, R<sub>3</sub> = H, M = Cr), II(R<sub>1</sub> = SO<sub>2</sub>NHMe, R<sub>2</sub> = NHAc, R<sub>3</sub> = H, M = Cr), and V in various concns. led to increased solution viscosity, presumably due to addition of dye mols. to the flexible III chain. E.P.R. and ir spectra suggested that the dyes reacted with the polymer; the exact nature of the reaction would, however, require further investigations.

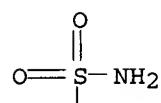
IT 24256-57-3

RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction with vinyl alc. polymers)

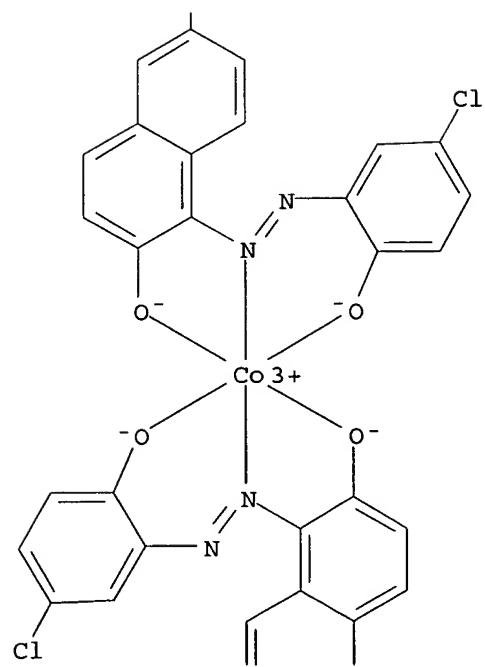
RN 24256-57-3 HCPLUS

CN Cobaltate(1-), [5-[(5-chloro-2-hydroxyphenyl)azo]-6-hydroxy-2-naphthalenesulfonamido(2-)] [1-[(5-chloro-2-hydroxyphenyl)azo]-2-naphtholato(2-)]-, sodium (8CI) (CA INDEX NAME)

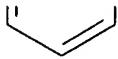
PAGE 1-A



PAGE 2-A



PAGE 3-A

● Na<sup>+</sup>

=> d ibib ab hitstr 60  
 YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, USPATFULL, PASCAL, JICST-EPLUS,  
 SCISEARCH, WPIX' - CONTINUE? (Y)/N:y

L84 (ANSWER 60 OF 105) USPATFULL on STN  
 ACCESSION NUMBER: 2005:69671 USPATFULL  
 TITLE: Process for insertion of acrylonitrile into a metal-carbon bond  
 INVENTOR(S): Weiss, Thomas, Mannheim, GERMANY, FEDERAL REPUBLIC OF Jordan, Richard, Chicago, IL, UNITED STATES Rieger, Bernhard, Oberelchingen, GERMANY, FEDERAL REPUBLIC OF Piefer, Claudia, Langenau, GERMANY, FEDERAL REPUBLIC OF

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005059812	A1	20050317
APPLICATION INFO.:	US 2004-919722	A1	20040816 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	DE 2003-10342571	20030915
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	LANXESS CORPORATION, PATENT DEPARTMENT/ BLDG 14, 100 BAYER ROAD, PITTSBURGH, PA, 15205-9741	
NUMBER OF CLAIMS:	4	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	1 Drawing Page(s)	
LINE COUNT:	1096	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

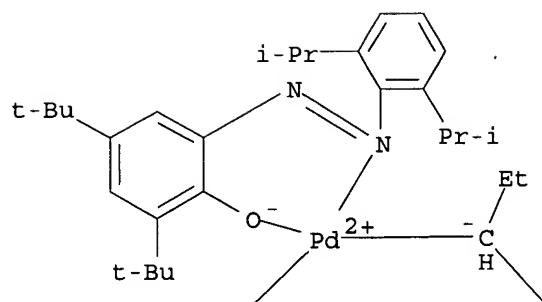
AB The present invention relates to compounds with a metal-carbon bond suitable for insertion of acrylonitrile, a process for the preparation of these compounds and the use of these compounds for further insertions of acrylonitrile and/or other monomers.

IT 847908-24-1P  
 (crystal structure; alkylmetal amido complex preparation and process for insertion of acrylonitrile into a palladium-carbon bond)

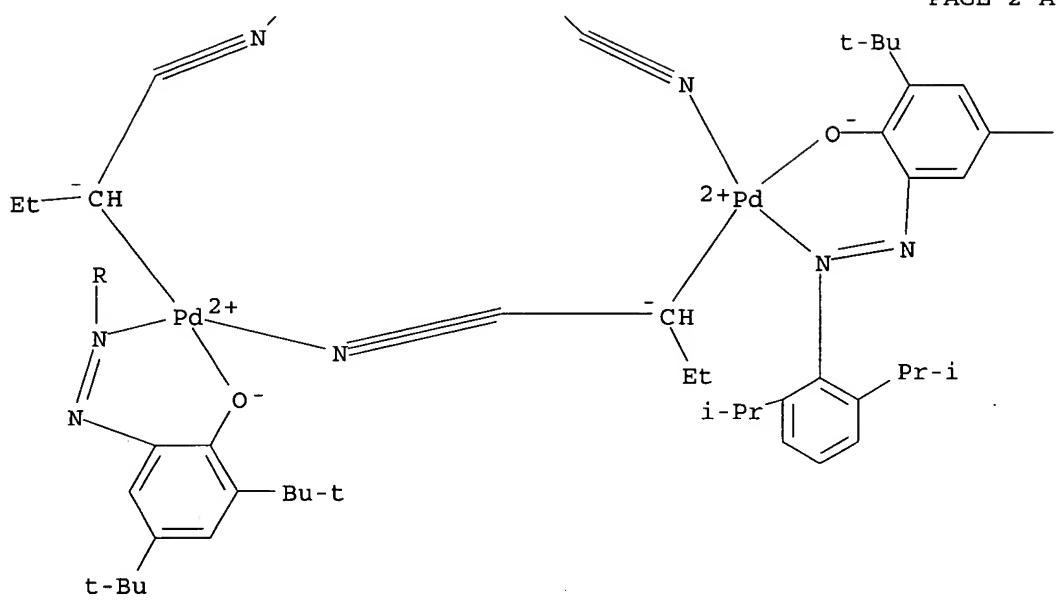
RN 847908-24-1 USPATFULL

CN INDEX NAME NOT YET ASSIGNED

PAGE 1-A



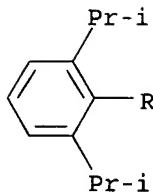
PAGE 2-A



PAGE 2-B

— Bu-t

PAGE 3-A



=> d ibib ab hitstr 61-84  
 YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, USPATFULL, PASCAL, JICST-EPLUS,  
 SCISEARCH, WPIX' - CONTINUE? (Y)/N:y

L84 / ANSWER 61 OF 105 -- USPATFULL on STN

ACCESSION NUMBER: 2004:247066 USPATFULL  
 TITLE: Electrophotographic printing method, monoazo iron complex compound, charge controlling agent using the same and toner using the charge controlling agent  
 INVENTOR(S): Otsuka, Hideyuki, Fukushima, JAPAN  
 Nemoto, Kazuo, Fukushima, JAPAN  
 Otani, Shinji, Shizuoka, JAPAN  
 Suzuki, Noriyuki, Fukushima, JAPAN  
 Yamada, Eisuke, Fukushima, JAPAN  
 Okubo, Masaki, Fukushima, JAPAN  
 PATENT ASSIGNEE(S): Hodogaya Chemical Co., Ltd., Kawasaki-shi, JAPAN  
 (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004191660	A1	20040930
APPLICATION INFO.:	US 2003-714853	A1	20031118 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 2003-96578	20030331
	JP 2003-201262	20030724
	JP 2003-207208	20030811
	JP 2003-356674	20031016

DOCUMENT TYPE: Utility  
 FILE SEGMENT: APPLICATION  
 LEGAL REPRESENTATIVE: OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C., 1940 DUKE STREET, ALEXANDRIA, VA, 22314  
 NUMBER OF CLAIMS: 26  
 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 14 Drawing Page(s)

LINE COUNT: 2286

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An electrophotographic printing method which comprises using a charge controlling agent containing a monoazo iron complex compound of the formula (1) as an effective component, ##STR1##

wherein A.sub.1, A.sub.2, B.sub.1 and B.sub.2 are respectively independently H, an alkyl group or a halogen atom, J is H, an alkali metal, NH.sub.4 or an alkylammonium, they may be two or more kinds, X.sub.1 and X.sub.2 are respectively independently H, an alkyl group or a halogen atom, and Y.sub.1 and Y.sub.2 are respectively independently H, an alkyl group or an aromatic group which may have a substituent, provided that a case in which A.sub.1, A.sub.2, B.sub.1, B.sub.2, X.sub.1, X.sub.2, Y.sub.1, and Y.sub.2 are hydrogen at the same time is excluded.

IT 672925-71-2P 672925-72-3DP, solid solution containing  
672925-72-3P 672925-73-4DP, solid solution containing

672925-73-4P 672925-74-5P 672925-75-6P

672925-76-7P 672925-77-8P 672925-78-9P

672925-79-0P 672925-80-3P 672925-81-4P

672925-82-5P 672925-83-6P 672925-84-7P

672925-85-8DP, solid solution containing 672925-85-8P

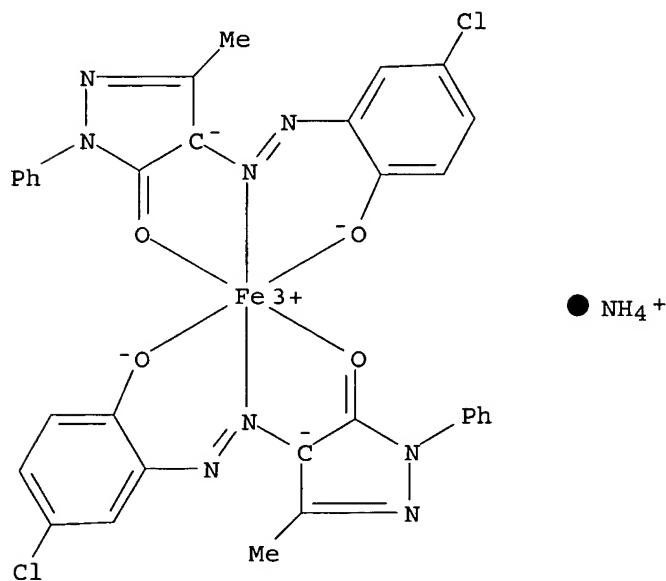
672925-86-9P 672925-87-0P 672925-89-2P

672925-90-5P 672925-91-6P 672925-92-7P

(monoazo metal complex compound for charge-controlling agent)

RN 672925-71-2 USPATFULL

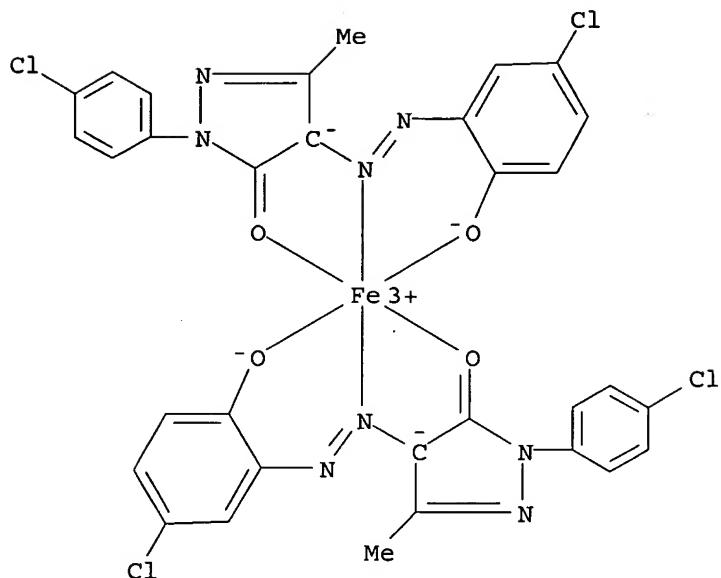
CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-2,4-dihydro-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)- $\kappa$ O3]-, ammonium (9CI) (CA INDEX NAME)



RN 672925-72-3 USPATFULL

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-2-(4-chlorophenyl)-2,4-dihydro-5-methyl-3H-pyrazol-3-onato(2-)- $\kappa$ O3]-, ammonium (9CI) (CA INDEX NAME)

PAGE 1-A



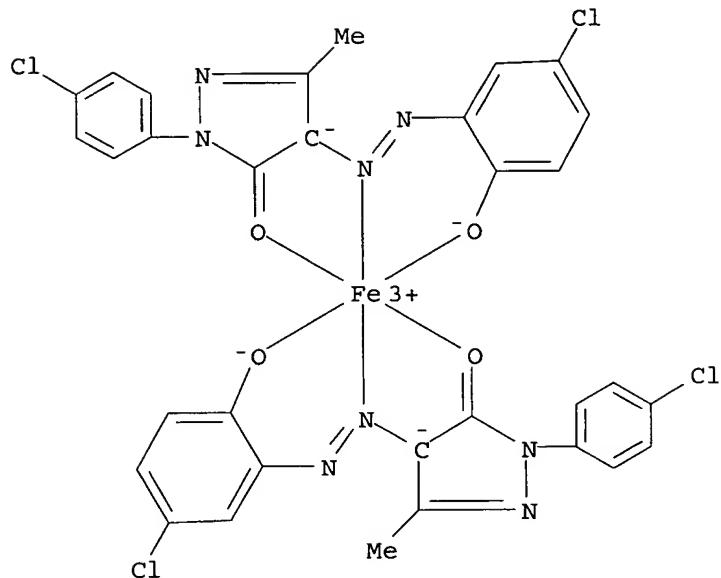
PAGE 2-A

● NH<sub>4</sub><sup>+</sup>

RN 672925-72-3 USPATFULL

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-2-(4-chlorophenyl)-2,4-dihydro-5-methyl-3H-pyrazol-3-onato(2-) -κO3] -, ammonium (9CI) (CA INDEX NAME)

PAGE 1-A

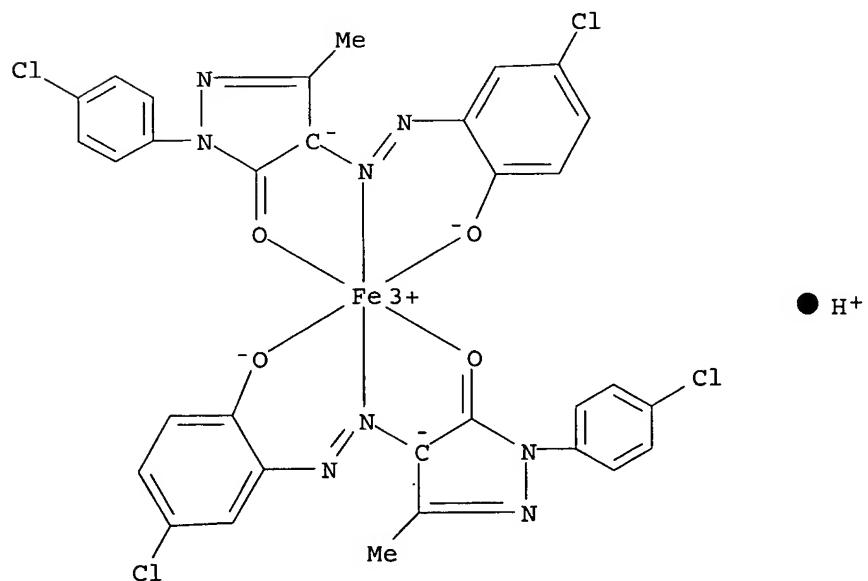


PAGE 2-A

● NH<sub>4</sub><sup>+</sup>

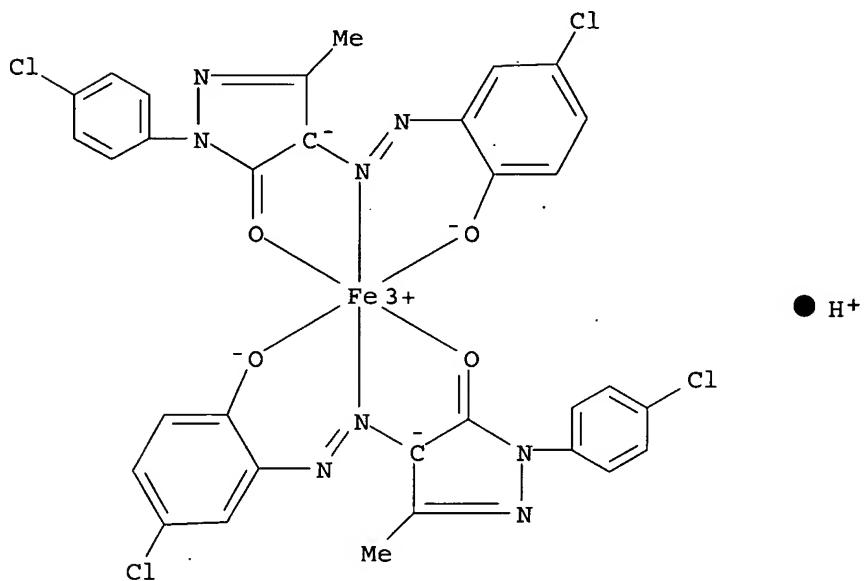
RN 672925-73-4 USPATFULL

CN Ferrate(1-), bis[4-[4-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-2-(4-chlorophenyl)-2,4-dihydro-5-methyl-3H-pyrazol-3-onato(2-) - $\kappa$ O3] -, hydrogen (9CI) (CA INDEX NAME)



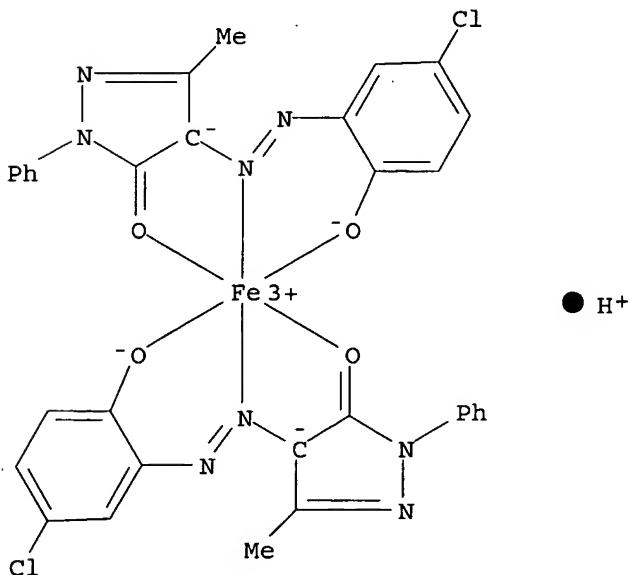
RN 672925-73-4 USPATFULL

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-2-(4-chlorophenyl)-2,4-dihydro-5-methyl-3H-pyrazol-3-onato(2-)- $\kappa$ O3]-, hydrogen (9CI) (CA INDEX NAME)



RN 672925-74-5 USPATFULL

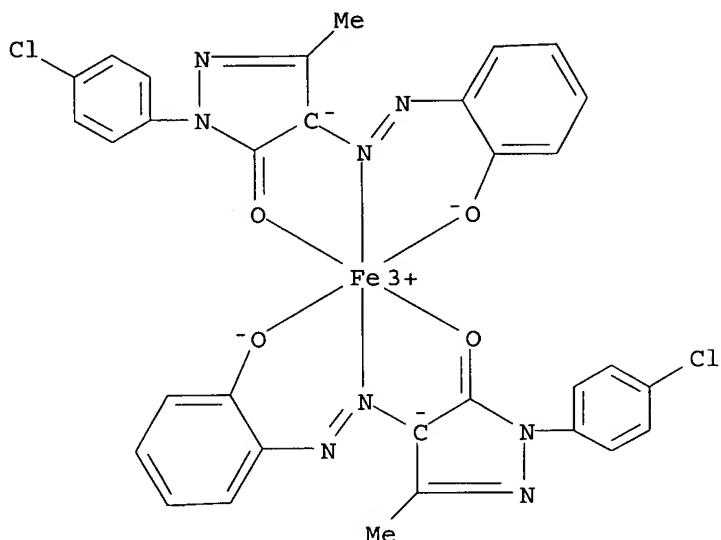
CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-2,4-dihydro-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)- $\kappa$ O3]-, hydrogen (9CI) (CA INDEX NAME)



RN 672925-75-6 USPATFULL

CN Ferrate(1-), bis[2-(4-chlorophenyl)-2,4-dihydro-4-[[2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-5-methyl-3H-pyrazol-3-onato(2-) - $\kappa$ O3]-, ammonium (9CI) (CA INDEX NAME)

PAGE 1-A

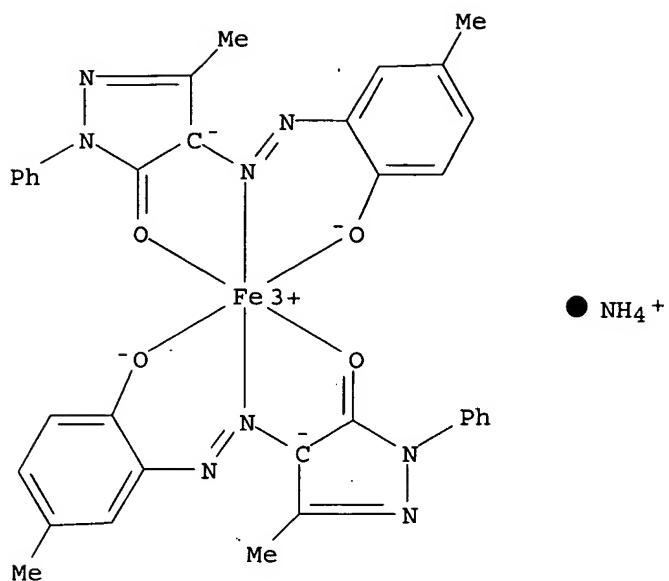


PAGE 2-A

● NH<sub>4</sub><sup>+</sup>

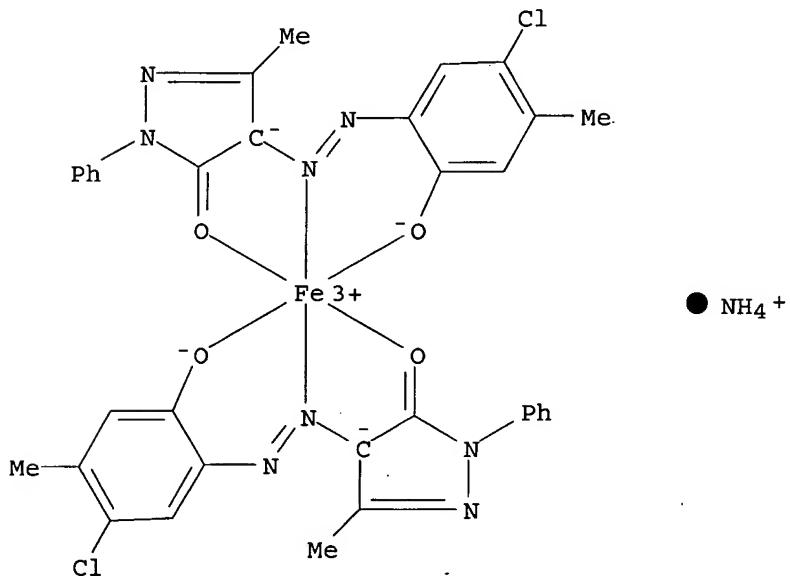
RN 672925-76-7 USPATFULL

CN Ferrate(1-), bis[2,4-dihydro-4-[[2-(hydroxy- $\kappa$ O)-5-methylphenyl]azo- $\kappa$ N1]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-) - $\kappa$ O3]-, ammonium (9CI) (CA INDEX NAME)



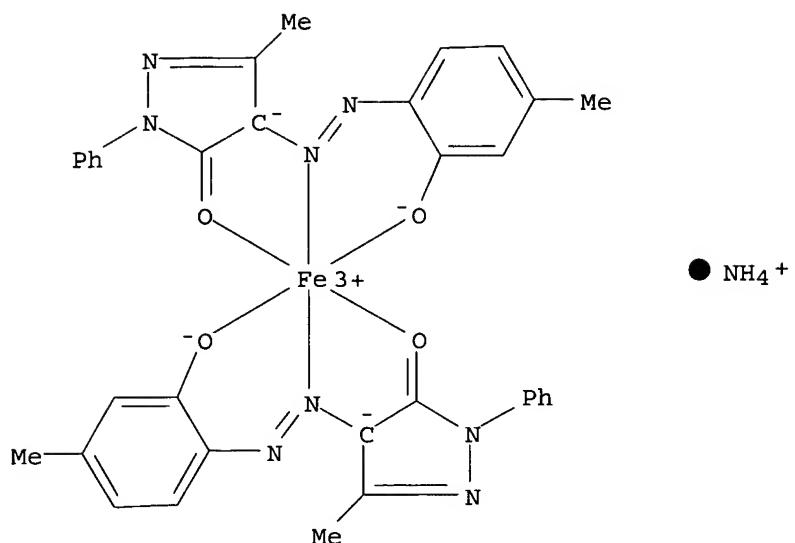
RN 672925-77-8 USPATFULL

CN Ferrate(1-), bis[4-[(5-chloro-2-(hydroxy-O)-4-methylphenyl]azo-N1]-2,4-dihydro-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-O3)-, ammonium (9CI) (CA INDEX NAME)

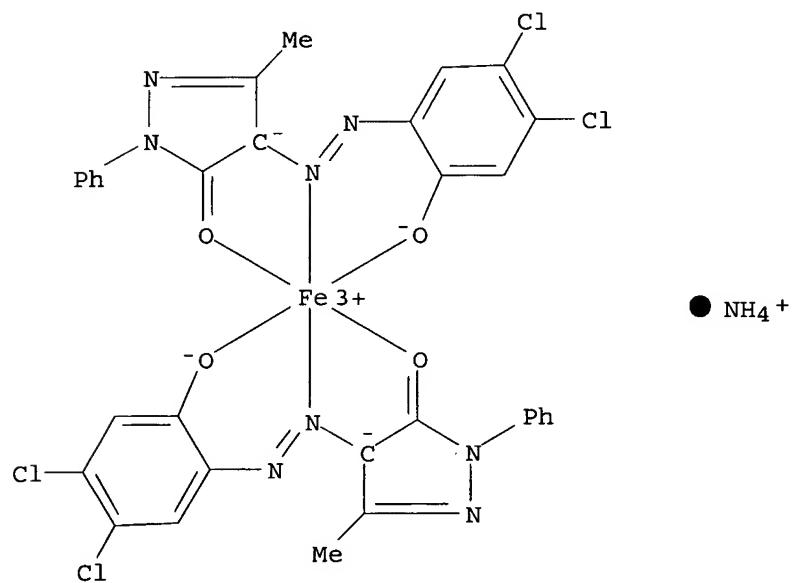


RN 672925-78-9 USPATFULL

CN Ferrate(1-), bis[2,4-dihydro-4-[(2-(hydroxy-O)-4-methylphenyl]azo-N1]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-O3)-, ammonium (9CI) (CA INDEX NAME)

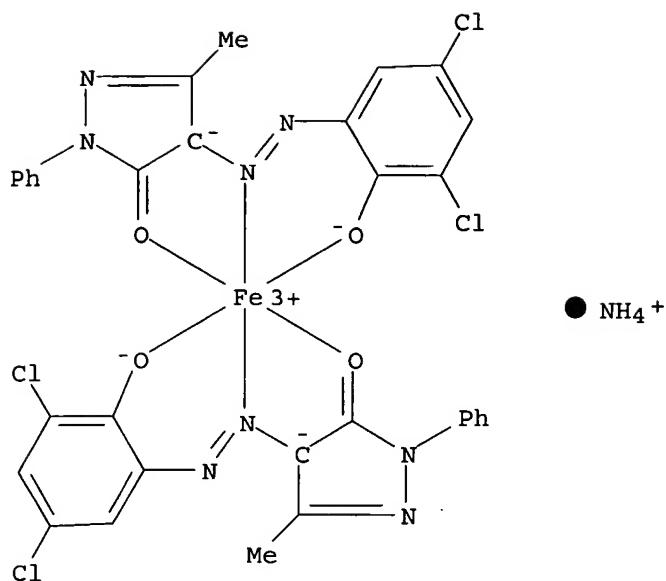


RN 672925-79-0 USPATFULL

CN Ferrate(1-), bis[4-[[4,5-dichloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-2,4-dihydro-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)- $\kappa$ O3]-, ammonium (9CI) (CA INDEX NAME)

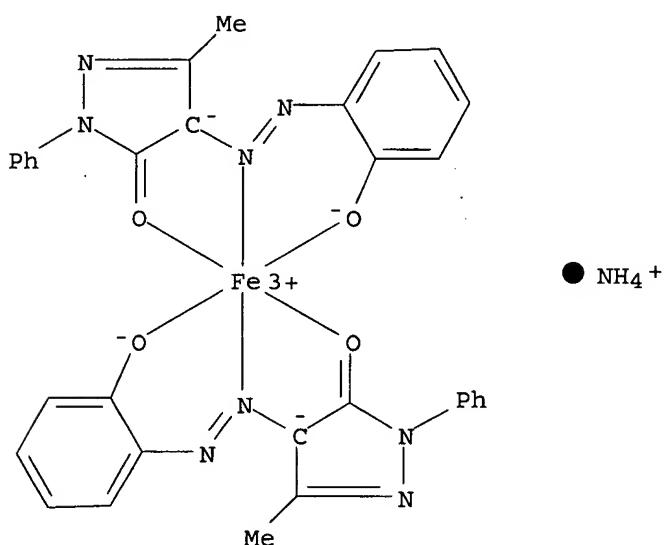
RN 672925-80-3 USPATFULL

CN Ferrate(1-), bis[4-[[3,5-dichloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-2,4-dihydro-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)- $\kappa$ O3]-, ammonium (9CI) (CA INDEX NAME)



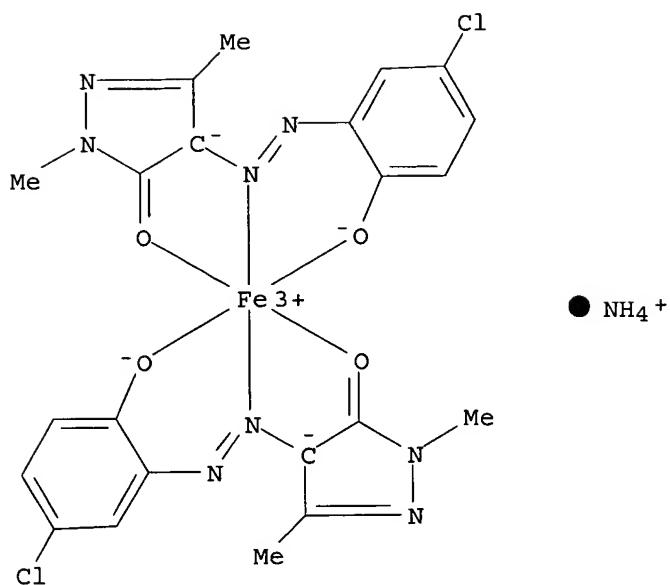
RN 672925-81-4 USPATFULL

CN Ferrate(1-), bis[2,4-dihydro-4-[[2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-) - $\kappa$ O3] -, ammonium (9CI)  
(CA INDEX NAME)



RN 672925-82-5 USPATFULL

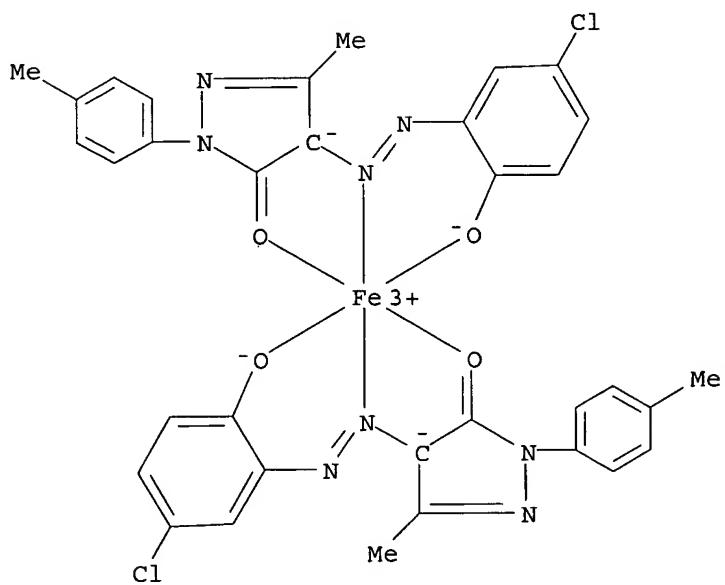
CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-2,4-dihydro-2,5-dimethyl-3H-pyrazol-3-onato(2-) - $\kappa$ O3] -, ammonium (9CI) (CA INDEX NAME)



RN 672925-83-6 USPATFULL

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-2,4-dihydro-5-methyl-2-(4-methylphenyl)-3H-pyrazol-3-onato(2-) - $\kappa$ O3] -, ammonium (9CI) (CA INDEX NAME)

PAGE 1-A

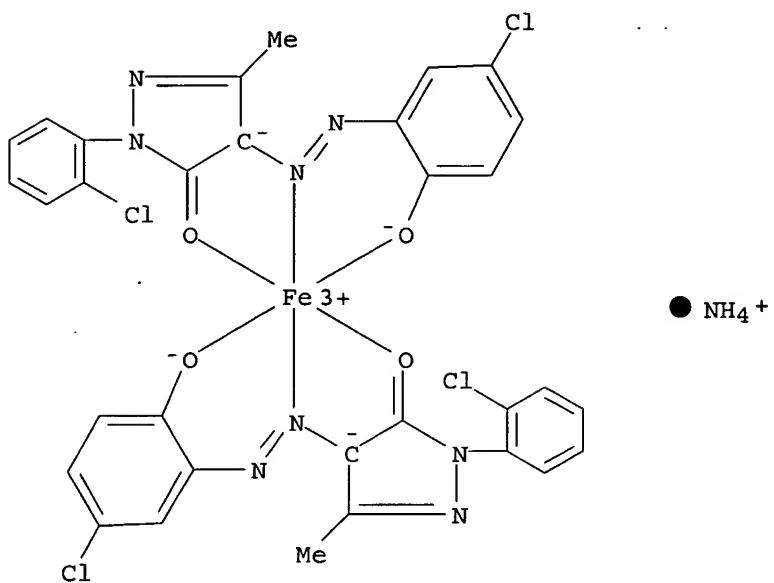


PAGE 2-A

● NH4+

RN 672925-84-7 USPATFULL

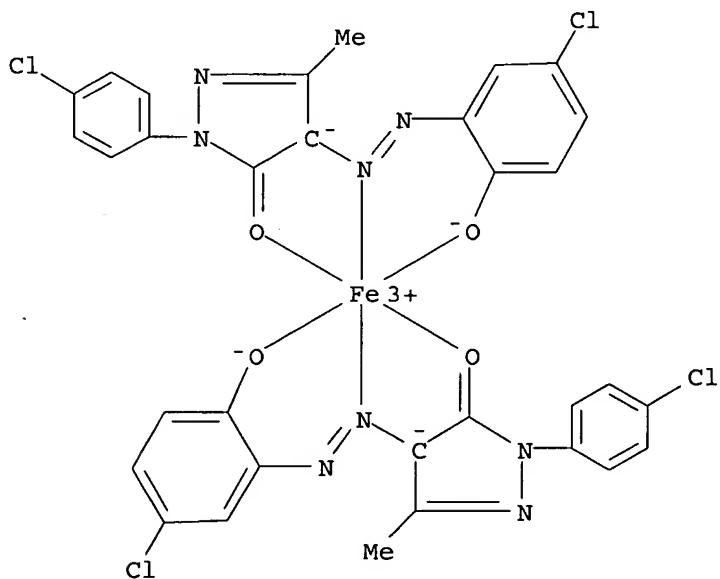
CN Ferrate(1-), bis[4-[(5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-2-(2-chlorophenyl)-2,4-dihydro-5-methyl-3H-pyrazol-3-onato(2-) - $\kappa$ O3]-, ammonium (9CI) (CA INDEX NAME)



RN 672925-85-8 USPATFULL

CN Ferrate(1-), bis[4-[(5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-2-(4-chlorophenyl)-2,4-dihydro-5-methyl-3H-pyrazol-3-onato(2-) - $\kappa$ O3]-, sodium (9CI) (CA INDEX NAME)

PAGE 1-A



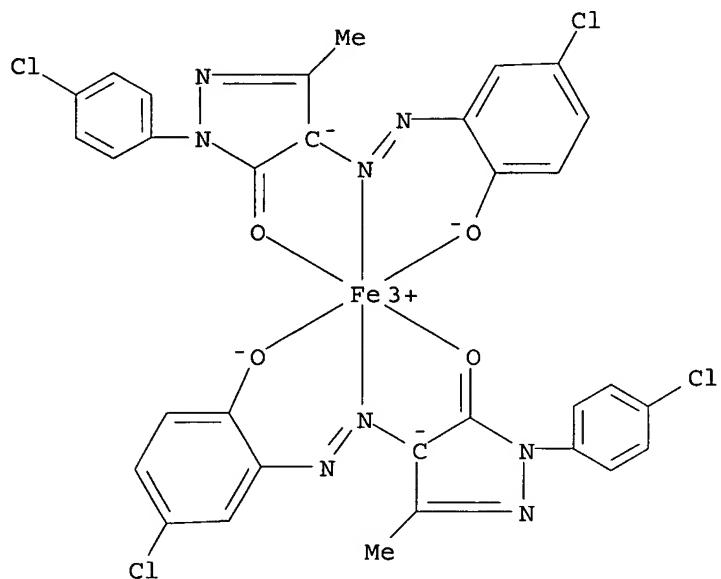
PAGE 2-A

● Na<sup>+</sup>

RN 672925-85-8 USPATFULL

CN Ferrate(1-) , bis[4-[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-2-(4-chlorophenyl)-2,4-dihydro-5-methyl-3H-pyrazol-3-onato(2-) - $\kappa$ O3] -, sodium (9CI) (CA INDEX NAME)

PAGE 1-A

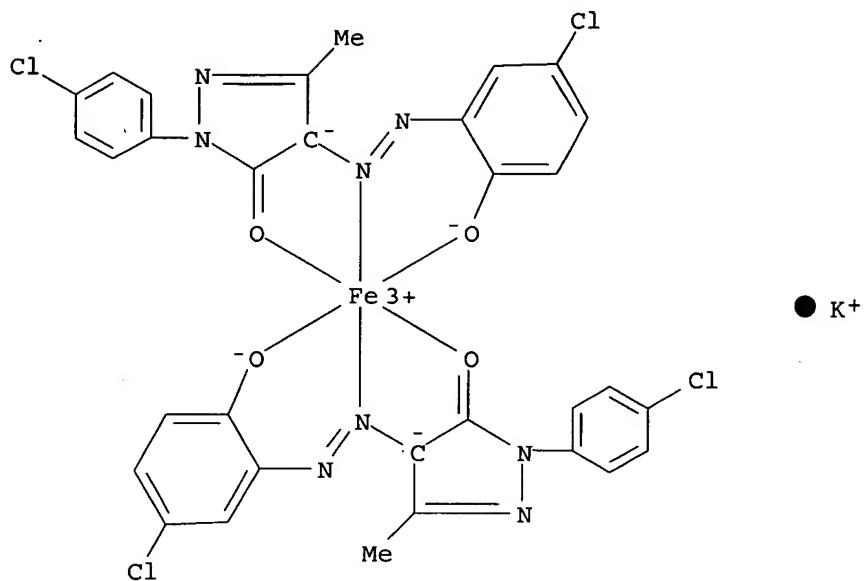


PAGE 2-A

● Na<sup>+</sup>

RN 672925-86-9 USPATFULL

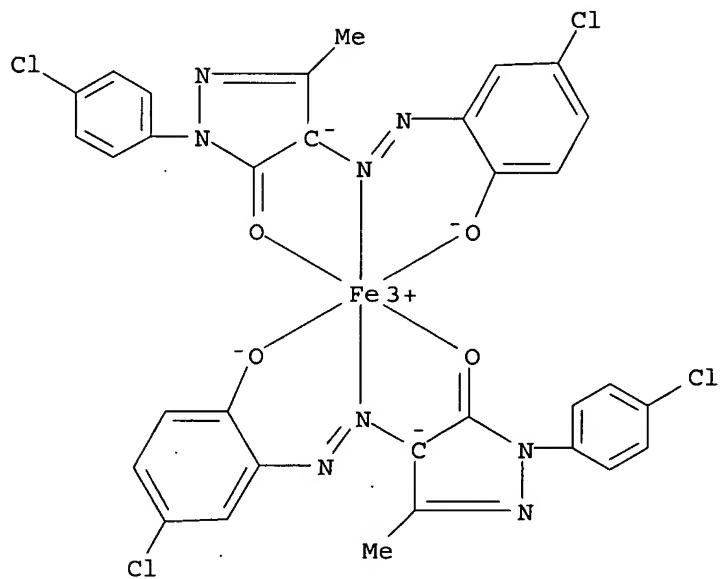
CN Ferrate(1-) , bis[4-[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-2-(4-chlorophenyl)-2,4-dihydro-5-methyl-3H-pyrazol-3-onato(2-) - $\kappa$ O3] -, potassium (9CI) (CA INDEX NAME)



RN 672925-87-0 USPATFULL

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-2-(4-chlorophenyl)-2,4-dihydro-5-methyl-3H-pyrazol-3-onato(2-) - $\kappa$ O3] -, lithium (9CI) (CA INDEX NAME)

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PAGE 2-A

● Li+

RN 672925-89-2 USPATFULL

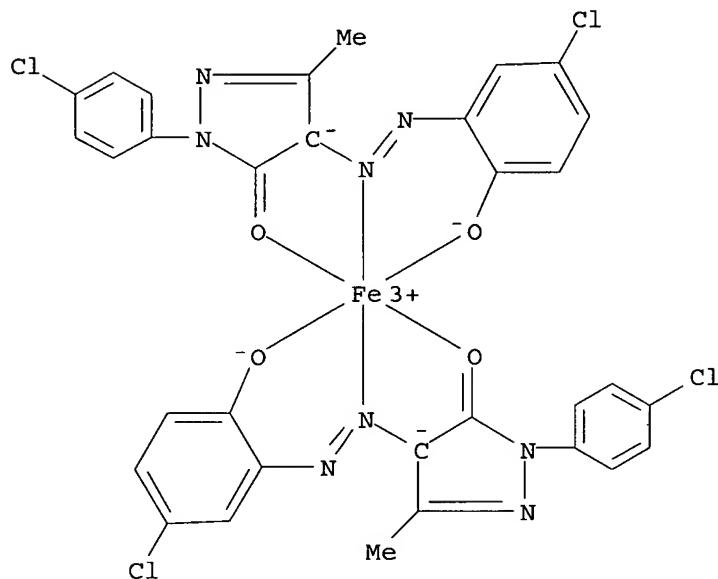
CN 2-Propanaminium, N,N,N-tris(1,1-dimethylethyl)-2-methyl-,  
 bis[4-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-2-(4-chlorophenyl)-2,4-dihydro-5-methyl-3H-pyrazol-3-onato(2-)- $\kappa$ O3]ferrate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 672925-88-1

CMF C32 H20 Cl4 Fe N8 O4

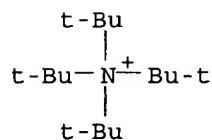
CCI CCS



CM 2

CRN 48069-38-1

CMF C16 H36 N



RN 672925-90-5 USPATFULL

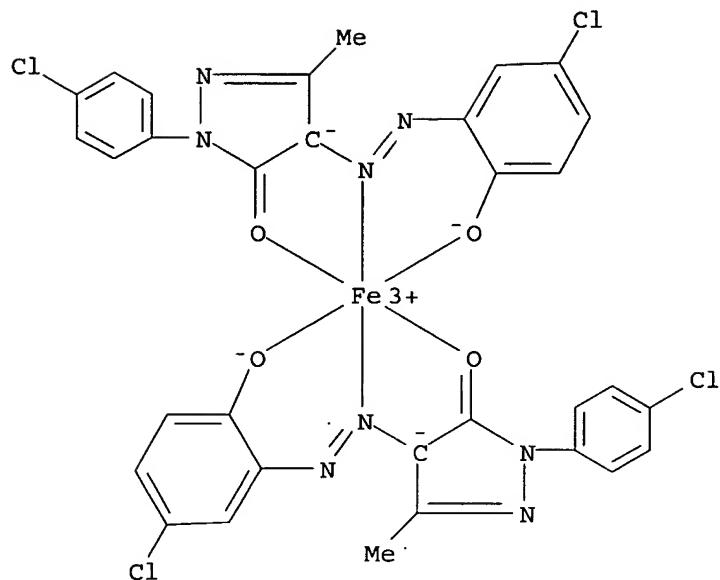
CN 1-Butanaminium, N,N,N-tributyl-, bis[4-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-2-(4-chlorophenyl)-2,4-dihydro-5-methyl-3H-pyrazol-3-onato(2-)- $\kappa$ O3]ferrate(1-) (9CI) (CA INDEX NAME)

CM 1

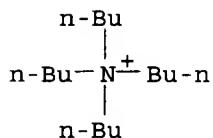
CRN 672925-88-1

CMF C32 H20 Cl4 Fe N8 O4

CCI CCS

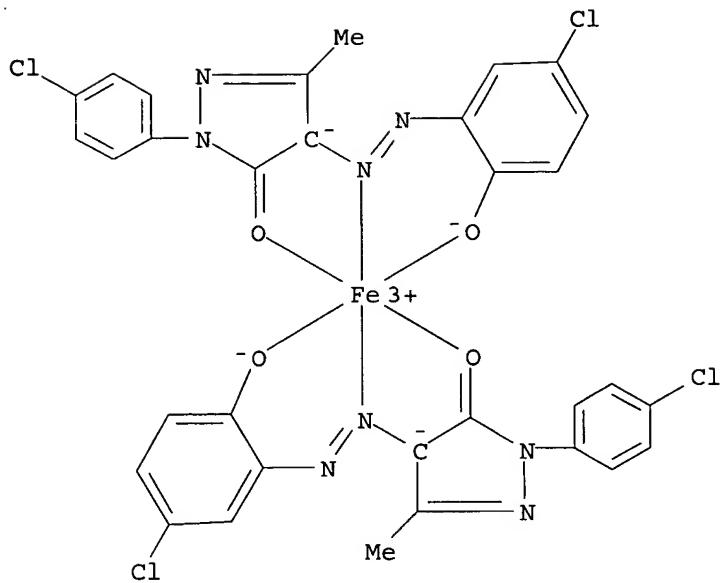


CM 2

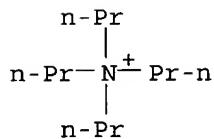
CRN 10549-76-5  
CMF C16 H36 NRN 672925-91-6 USPATFULL  
CN 1-Propanaminium, N,N,N-tripropyl-, bis[4-[[5-chloro-2-(hydroxy- $\kappa O$ )phenyl]azo- $\kappa N1$ ]-2-(4-chlorophenyl)-2,4-dihydro-5-methyl-3H-pyrazol-3-onato(2-) - $\kappa O3$ ]ferrate(1-) (9CI) (CA INDEX NAME)

CM 1

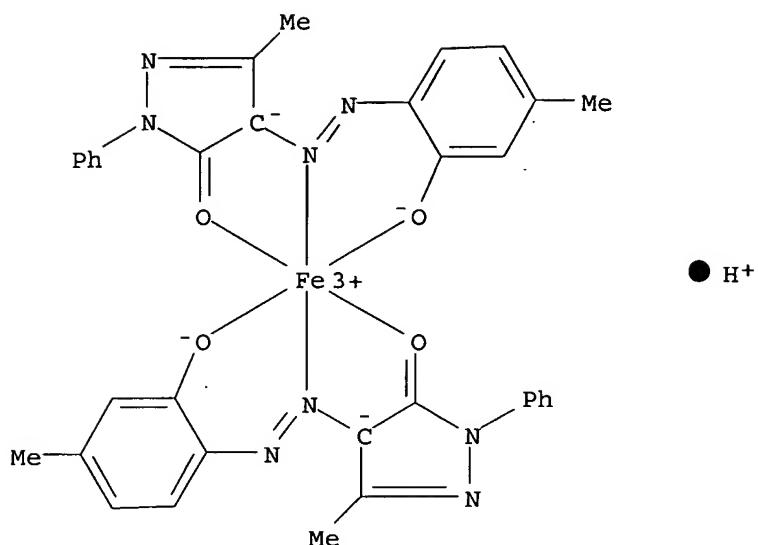
CRN 672925-88-1  
CMF C32 H20 Cl4 Fe N8 O4  
CCI CCS



CM 2

CRN 13010-31-6  
CMF C12 H28 N

RN 672925-92-7 USPATFULL  
 CN Ferrate(1-), bis[2,4-dihydro-4-[[2-(hydroxy-κO)-4-methylphenyl]azo-  
 κN1]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-) -κO3]-,  
 hydrogen (9CI) (CA INDEX NAME)



L84 ANSWER 62 OF 105... USPATFULL on STN

ACCESSION NUMBER: 2004:240192 USPATFULL

TITLE: Monometallic azo complexes of late transition metals  
for the polymerization of olefins

INVENTOR(S): Weiss, Thomas, Mannheim, GERMANY, FEDERAL REPUBLIC OF

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004186007	A1	20040923
APPLICATION INFO.:	US 2004-768291	A1	20040130 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	DE 2003-10304158	20030203
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	BAYER MATERIAL SCIENCE LLC, 100 BAYER ROAD, PITTSBURGH, PA, 15205	
NUMBER OF CLAIMS:	17	
EXEMPLARY CLAIM:	1	
LINE COUNT:	1541	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to compounds of transition metals with azo ligands, a process for their production, the use of these compounds as catalysts, a process for olefin (co)polymerization using these compounds, reaction products of these compounds with co-catalysts, the olefin (co)polymer, the use of these olefin (co)polymers for the production of molded parts, as well as molded parts that are produced from the olefin (co)polymers.

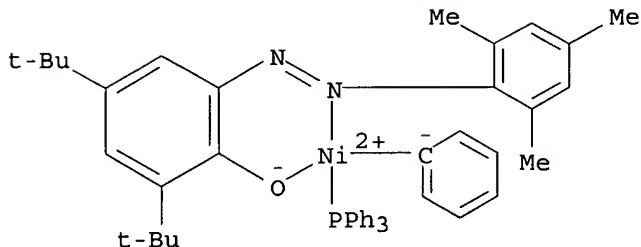
IT 732285-98-2P 732285-99-3P 732286-00-9P  
732286-01-0P 732286-02-1P 732286-03-2P  
732286-04-3P

(preparation of monometallic azo complexes of late transition metals for the polymerization of olefins)

RN 732285-98-2 USPATFULL

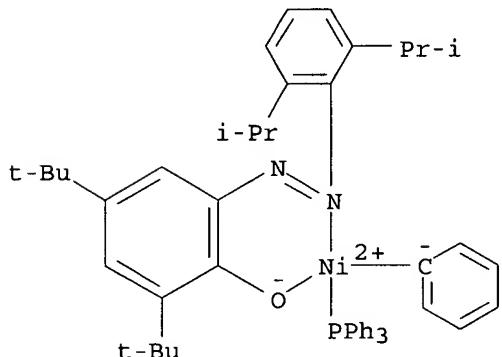
CN Nickel, [2,4-bis(1,1-dimethylethyl)-6-[(2,4,6-trimethylphenyl)azo-

$\kappa\text{N}2]$ phenolato- $\kappa\text{O}$ ]phenyl(triphenylphosphine)- (9CI) (CA INDEX NAME)



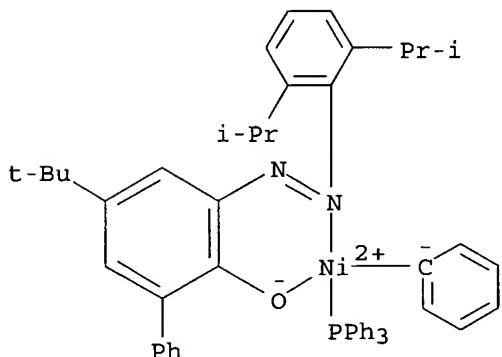
RN 732285-99-3 USPATFULL

CN Nickel, [2-[2,6-bis(1-methylethyl)phenyl]azo- $\kappa\text{N}2$ ]-4,6-bis(1,1-dimethylethyl)phenolato- $\kappa\text{O}$ ]phenyl(triphenylphosphine)- (9CI) (CA INDEX NAME)



RN 732286-00-9 USPATFULL

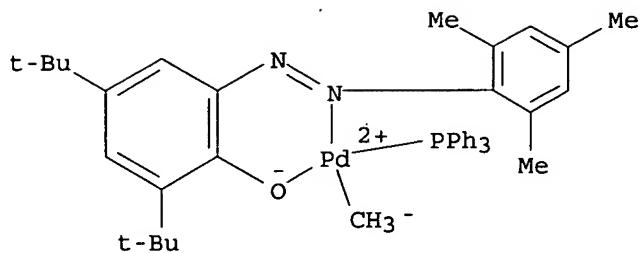
CN Nickel, [3-[2,6-bis(1-methylethyl)phenyl]azo- $\kappa\text{N}2$ ]-5-(1,1-dimethylethyl)[1,1'-biphenyl]-2-olato- $\kappa\text{O}$ ]phenyl(triphenylphosphine)- (9CI) (CA INDEX NAME)



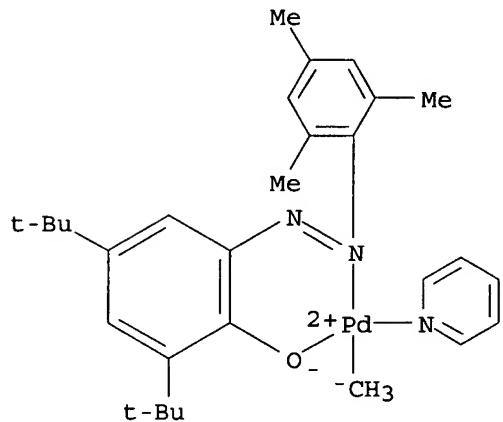
RN 732286-01-0 USPATFULL

CN Palladium, [2,4-bis(1,1-dimethylethyl)-6-[(2,4,6-trimethylphenyl)azo- $\kappa\text{N}2$ ]phenolato- $\kappa\text{O}$ ]methyl(triphenylphosphine)- (9CI) (CA INDEX NAME)

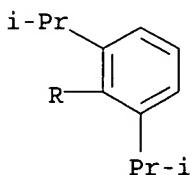
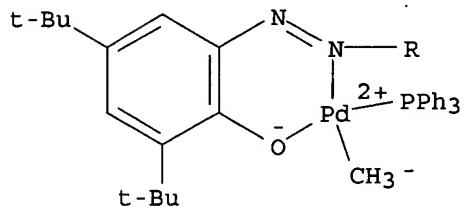
INDEX NAME)



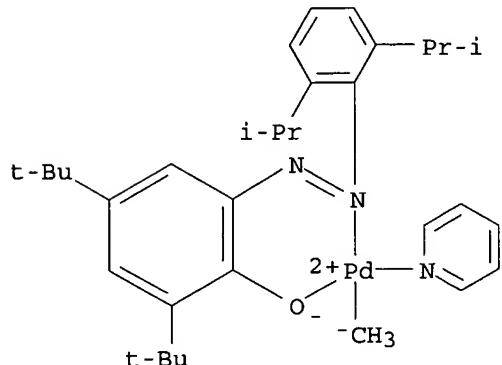
RN 732286-02-1 USPATFULL

CN Palladium, [2,4-bis(1,1-dimethylethyl)-6-[(2,4,6-trimethylphenyl)azo- $\kappa$ N2]phenolato- $\kappa$ O]methyl(pyridine)- (9CI) (CA INDEX NAME)

RN 732286-03-2 USPATFULL

CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo- $\kappa$ N2]-4,6-bis(1,1-dimethylethyl)phenolato- $\kappa$ O]methyl(triphenylphosphine)- (9CI) (CA INDEX NAME)

RN 732286-04-3 USPATFULL

CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo- $\kappa$ N2]-4,6-bis(1,1-dimethylethyl)phenolato- $\kappa$ O]methyl(pyridine)- (9CI) (CA INDEX NAME)

L84 ANSWER 63 OF 105 USPATFULL on STN

ACCESSION NUMBER: 2003:37423 USPATFULL

TITLE: Electrophotographic toner and development process with improved charge to mass stability

INVENTOR(S): Fields, Robert D., Rochester, NY, UNITED STATES  
Lambert, Patrick M., Rochester, NY, UNITED STATES  
Tyagi, Dinesh, Fairport, NY, UNITED STATES  
Anderson, James H., Rochester, NY, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003027068	A1	20030206
APPLICATION INFO.:	US 2001-880689	A1	20010613 (9)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	Luke A. Kilyk, KILYK & BOWERSOX, P.L.L.C., 53A Lee Street, Warrenton, VA, 20186		

NUMBER OF CLAIMS: 39

EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 8 Drawing Page(s)

LINE COUNT: 988

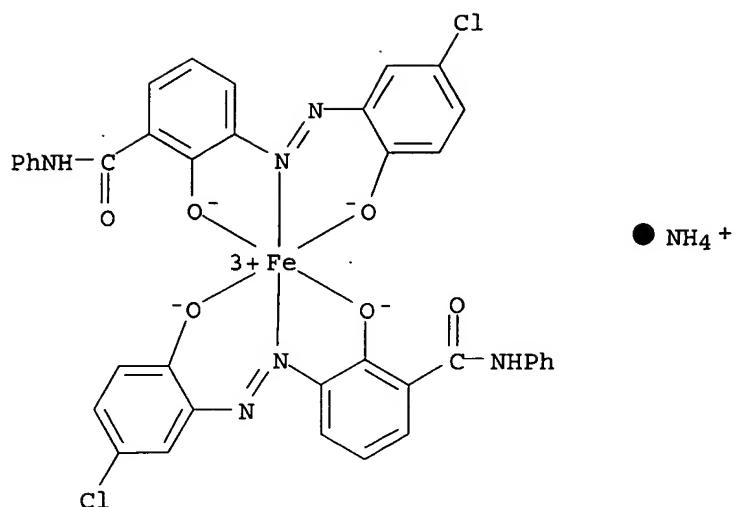
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Toners and developers are disclosed. The toner of the present invention contains at least one toner resin, at least one charge control agent, at least one surface treatment agent, and optionally at least one release agent and/or colorant. The toners of the present invention have excellent triboelectric stability over a wide range of temperatures and relative humidity environmental conditions. Further, the toners of the present invention have excellent charge to mass stability over long periods of time. Development systems and methods for developing electrostatic images with toner are further disclosed.

IT 156108-08-6, T 77  
(T 77; electrophotog. toner and development process with improved charge to mass stability)

RN 156108-08-6 USPATFULL

CN Ferrate(1-), bis[3-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-2-(hydroxy- $\kappa$ O)-N-phenylbenzamidato(2-)], ammonium (9CI) (CA INDEX NAME)



L84 ANSWER 64 OF 105

USPATFULL on STN

ACCESSION NUMBER:

2002:105849 USPATFULL

TITLE:

Toner

INVENTOR(S):

Kasuya, Takashige, Shizuoka-ken, JAPAN  
 Tanikawa, Hirohide, Shizuoka-ken, JAPAN  
 Yusa, Hiroshi, Tokyo, JAPAN  
 Ogawa, Yoshihiro, Shizuoka-ken, JAPAN  
 Yamazaki, Katsuhisa, Numazu-shi, JAPAN  
 Kashiwabara, Ryota, Numazu-shi, JAPAN

PATENT INFORMATION:  
 APPLICATION INFO.:

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002055053	A1	20020509
APPLICATION INFO.:	US 2001-946498	A1	20010906 (9)

PRIORITY INFORMATION:

JP 2000-269632 20000906

DOCUMENT TYPE:

Utility

FILE SEGMENT:

APPLICATION

LEGAL REPRESENTATIVE:

FITZPATRICK CELLA HARPER &amp; SCINTO, 30 ROCKEFELLER PLAZA, NEW YORK, NY, 10112

NUMBER OF CLAIMS:

18

EXEMPLARY CLAIM:

1

NUMBER OF DRAWINGS:

8 Drawing Page(s)

LINE COUNT:

1784

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A toner showing quick chargeability and stable chargeability in a high humidity environment is provided by a combination of a specific polyester binder resin and a specific azo iron compound. The polyester binder resin has an acid value (Av) of 0.5 to 30 mgKOH/g and a hydroxyl value (OHv) of 1 to 50 mgKOH/g giving a ratio (Av/OHv) therebetween satisfying:  $0.05 \leq Av/OHv \leq 2.0$ . The azo iron compound is preferably an iron complex (salt) including as a ligand a mono-azo compound formed by diazo coupling between a 2-aminophenol (derivative) and an alkyl-substituted naphthol (derivative).

IT 268728-80-9P 337369-22-9P 337369-26-3P

337369-30-9P 403790-98-7P 403790-99-8P

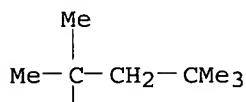
403791-00-4P

(azo iron compound; electrophotog. toner exhibiting quick and stable  
chargeability in high humidity environment)

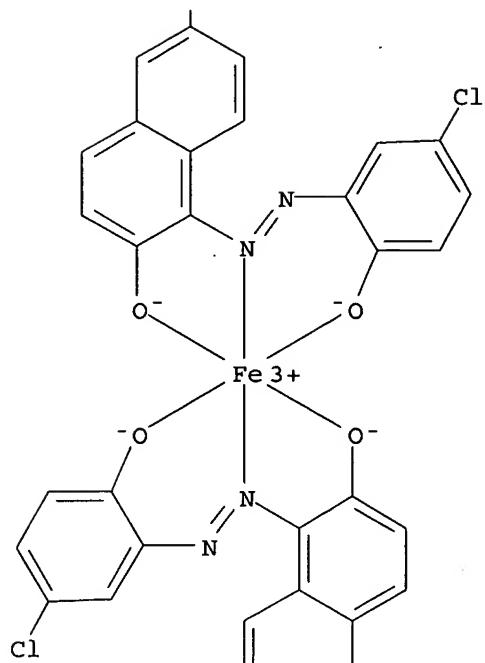
RN 268728-80-9 USPATFULL

CN Ferrate(1-), bis[1-[{5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-6-  
(1,1,3,3-tetramethylbutyl)-2-naphthalenolato(2-)- $\kappa$ O]-, sodium  
(9CI) (CA INDEX NAME)

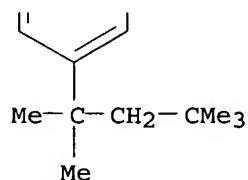
PAGE 1-A



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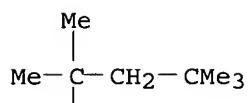
PAGE 3-A

● Na<sup>+</sup>

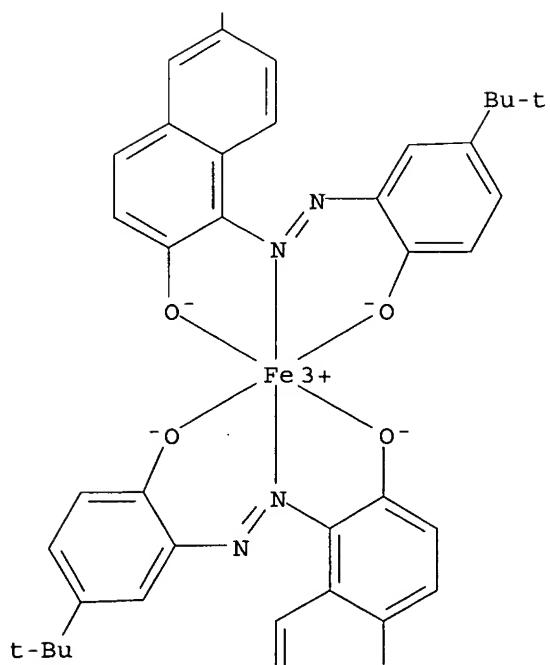
RN 337369-22-9 USPATFULL

CN Ferrate(1-), bis[1-[5-(1,1-dimethylethyl)-2-(hydroxy- $\kappa$ O)phenyl]azo-  
 $\kappa$ N1]-6-(1,1,3,3-tetramethylbutyl)-2-naphthalenolato(2-)- $\kappa$ O]-  
, sodium (9CI) (CA INDEX NAME)

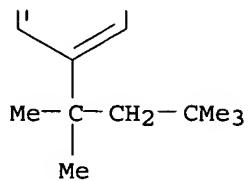
PAGE 1-A



PAGE 2-A



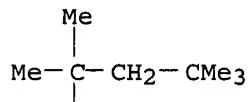
PAGE 3-A

● Na<sup>+</sup>

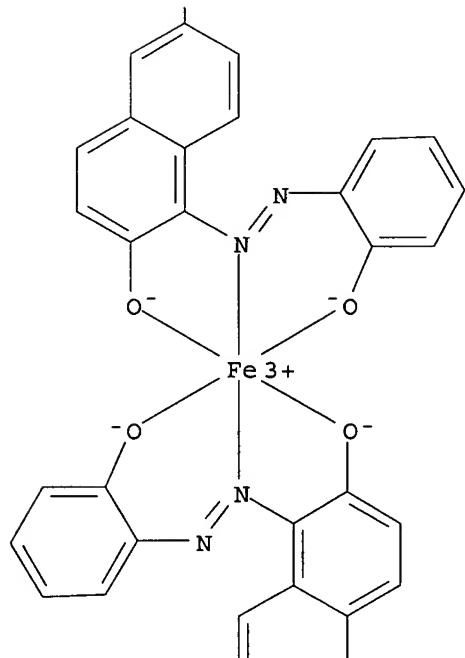
RN 337369-26-3 USPATFULL

CN Ferrate(1-), bis[1-[2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-6-(1,1,3,3-tetramethylbutyl)-2-naphthalenolato(2-)- $\kappa$ O]-, sodium (9CI) (CA INDEX NAME)

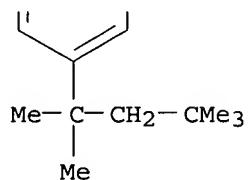
PAGE 1-A



PAGE 2-A



PAGE 3-A

● Na<sup>+</sup>

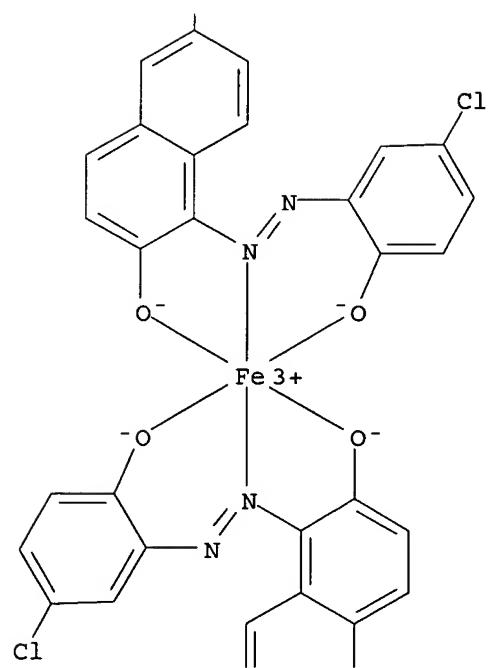
RN 337369-30-9 USPATFULL

CN Ferrate(1-), bis[1-[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-6-(1,1-dimethylethyl)-2-naphthalenolato(2-)-κO]-, sodium (9CI) (CA INDEX NAME)

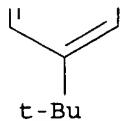
PAGE 1-A

t-Bu  
|

PAGE 2-A



PAGE 3-A

● Na<sup>+</sup>

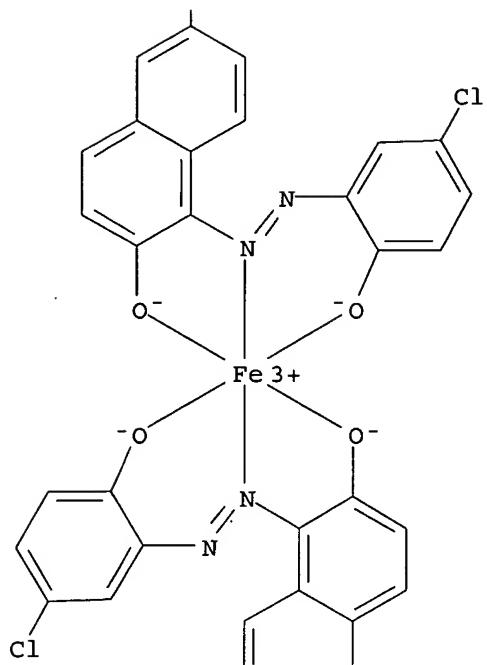
RN 403790-98-7 USPATFULL

CN Ferrate(1-), bis[6-butyl-1-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-2-naphthalenolato(2-) - $\kappa$ O]-, sodium (9CI) (CA INDEX NAME)

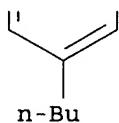
PAGE 1-A



PAGE 2-A



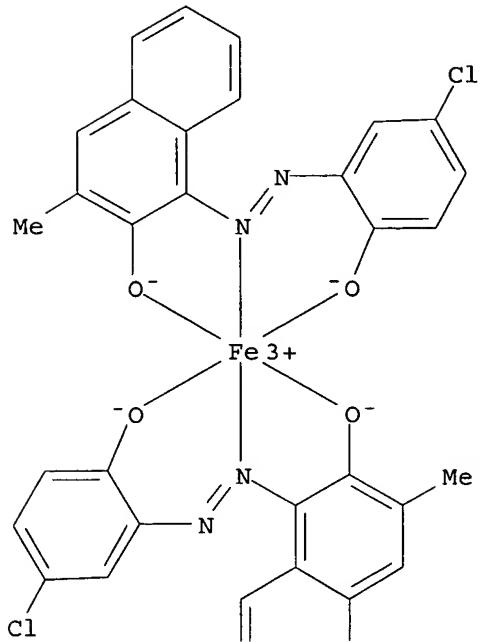
PAGE 3-A

● Na<sup>+</sup>

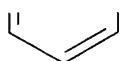
RN 403790-99-8 USPATFULL

CN Ferrate(1-), bis[1-[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-3-methyl-2-naphthalenolato(2-)- $\kappa$ O]-, sodium (9CI) (CA INDEX NAME)

PAGE 1-A



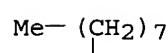
PAGE 2-A

● Na<sup>+</sup>

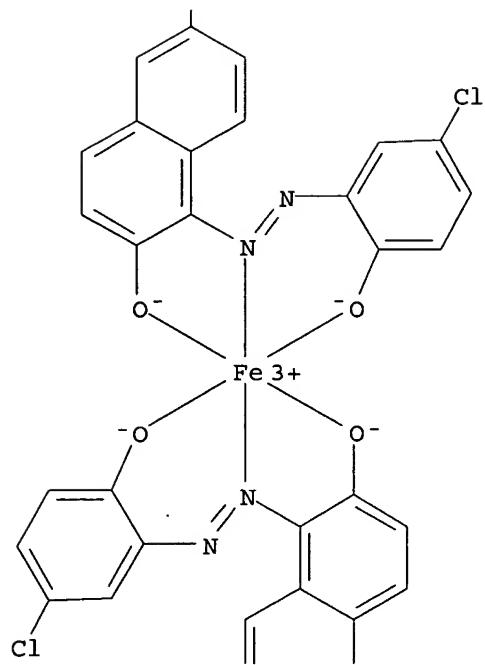
RN 403791-00-4 USPATFULL

CN Ferrate(1-), bis[1-[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-6-octyl-2-naphthalenolato(2-) -κO] -, sodium (9CI) (CA INDEX NAME)

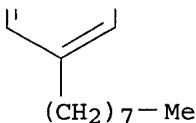
PAGE 1-A



PAGE 2-A



PAGE 3-A

● Na<sup>+</sup>

L84 ANSWER 65 OF 105 USPATFULL on STN

ACCESSION NUMBER: 2002:99026 USPATFULL

TITLE: Dry toner, image forming method and process cartridge  
 INVENTOR(S): Yamazaki, Katsuhisa, Numazu-shi, JAPAN  
 Onuma, Tsutomu, Yokohama-shi, JAPAN  
 Okubo, Nobuyuki, Yokohama-shi, JAPAN  
 Nakanishi, Tsuneo, Abiko-shi, JAPAN  
 Hiratsuka, Kaori, Shizuoka-ken, JAPAN

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002051922	A1	20020502
	US 6589701	B2	20030708
APPLICATION INFO.:	US 2001-911723	A1	20010725 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 2000-228078	20000728
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	FITZPATRICK CELLA HARPER & SCINTO, 30 ROCKEFELLER PLAZA, NEW YORK, NY, 10112	

NUMBER OF CLAIMS: 52  
 EXEMPLARY CLAIM: 1  
 NUMBER OF DRAWINGS: 25 Drawing Page(s)  
 LINE COUNT: 3607

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A dry magnetic toner is formed of magnetic toner particles comprising a binder resin and magnetic iron oxide particles. The magnetic toner is provided with excellent developing performances and transferability by controlling the presence of isolated iron-containing particles and containing a high percentage of spherical particles, the amount of which is controlled relative to the weight-average particle size of the magnetic toner and a content of particles of 3 µm or below in the magnetic toner.

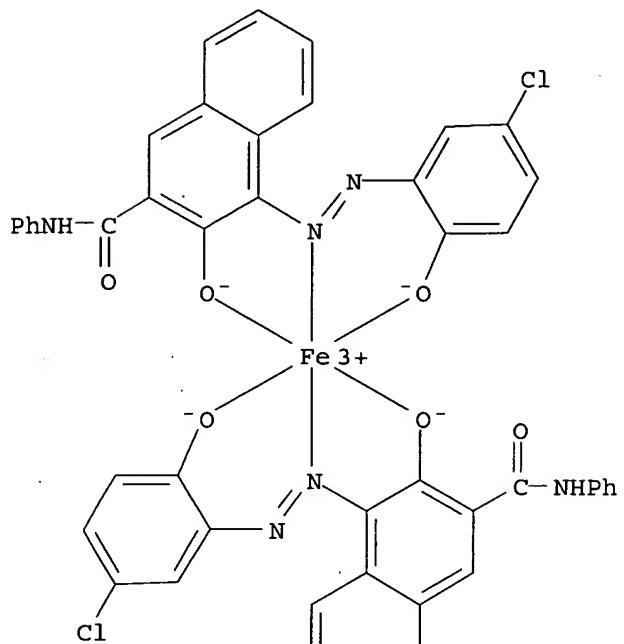
IT 104815-18-1 394653-25-9

(charge-control agent; magnetic dry toner comprising iron oxide particles and binder resin and wax and organometallic complex as charge-control agent)

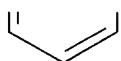
RN 104815-18-1 USPATFULL

CN Ferrate(1-), bis[4-[(5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamido(2-)]-, ammonium (9CI) (CA INDEX NAME)

PAGE 1-A



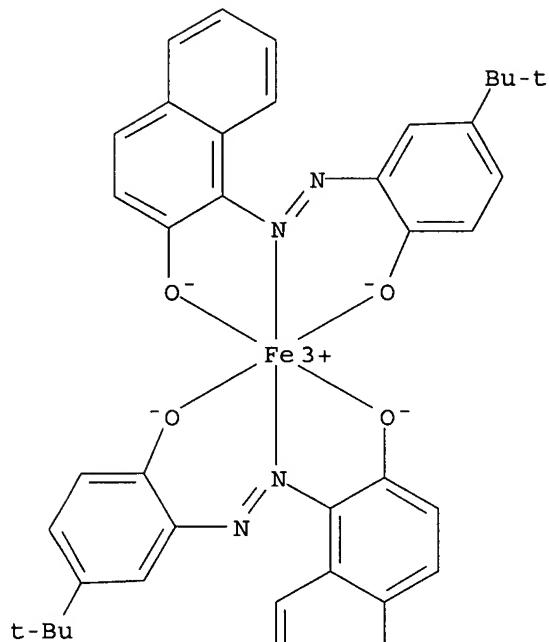
PAGE 2-A



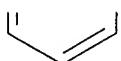
RN 394653-25-9 USPATFULL

CN Ferrate(1-), bis[1-[5-(1,1-dimethylethyl)-2-(hydroxy-κO)phenyl]azo-  
κN1]-2-naphthalenolato(2-) -κO], hydrogen (9CI) (CA INDEX  
NAME)

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PAGE 2-A



L84 ANSWER 66 OF 105 USPATFULL on STN  
 ACCESSION NUMBER: 2002:310741 USPATFULL  
 TITLE: Toner and resin composition for the toner  
 INVENTOR(S): Karaki, Yuki, Shizuoka-ken, JAPAN  
 Yusa, Hiroshi, Machida, JAPAN  
 Kasuya, Takashige, Shizuoka-ken, JAPAN  
 Ogawa, Yoshihiro, Shizuoka-ken, JAPAN  
 PATENT ASSIGNEE(S): Canon Kabushiki Kaisha, Tokyo, JAPAN (non-U.S.  
 corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6485875	B1	20021126
APPLICATION INFO.:	US 2000-696296		20001026 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1999-303335	19991026

JP 2000-8460      20000118  
 DOCUMENT TYPE: Utility  
 FILE SEGMENT: GRANTED  
 PRIMARY EXAMINER: Rodee, Christopher  
 LEGAL REPRESENTATIVE: Fitzpatrick, Cella, Harper & Scinto  
 NUMBER OF CLAIMS: 42  
 EXEMPLARY CLAIM: 1  
 NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)  
 LINE COUNT: 2222  
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A toner is constituted by at least a binder resin, a colorant and a wax. The binder resin has been formed from monomers including a vinyl monomer and polyester-forming monomers containing at least a polybasic carboxylic acid having three or more carboxyl groups or its anhydride, and comprises at least a hybrid resin comprising a vinyl polymer unit and a polyester unit.

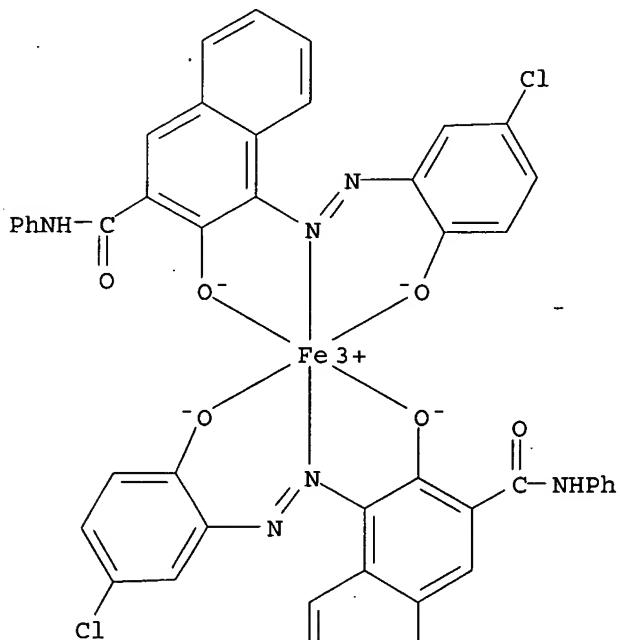
IT 104815-18-1

(electrophotog. toner comprising hybrid binder resin prepared from vinyl and polyester-forming monomers to achieve uniform dispersibility of wax in binder)

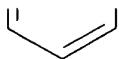
RN 104815-18-1 USPATFULL

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-3-(hydroxy- $\kappa$ O)-N-phenyl-2-naphthalenecarboxamido(2-)]-, ammonium (9CI) (CA INDEX NAME)

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L84 ANSWER 67 OF 105 USPATFULL on STN  
 ACCESSION NUMBER: 2002:201643 USPATFULL  
 TITLE: Limiting the presence of microorganisms using  
 polymer-bound metal-containing compositions  
 INVENTOR(S): Landgrebe, Kevin D., Woodbury, MN, United States  
 Hastings, David J., London, CANADA  
 Smith, Terrance P., Woodbury, MN, United States  
 Cuny, Gregory D., Hudson, MA, United States  
 Sengupta, Ashok, London, CANADA  
 Mudalige, Chandrika D., London, CANADA  
 Brandys, Frank A., London, CANADA  
 PATENT ASSIGNEE(S): 3M Innovative Properties Company, St. Paul, MN, United  
 States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6432396	B1	20020813
APPLICATION INFO.:	US 2000-611346		20000706 (9)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	GRANTED		
PRIMARY EXAMINER:	Page, Thurman K.		
ASSISTANT EXAMINER:	Fubara, Blessing		
LEGAL REPRESENTATIVE:	Busse, Paul W., Gram, Christopher D., Sprague, Robert W.		

NUMBER OF CLAIMS: 29

EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 3 Drawing Figure(s); 2 Drawing Page(s)

LINE COUNT: 1193

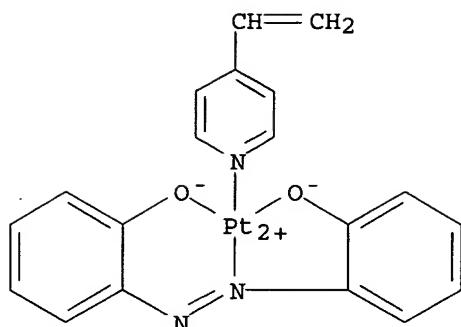
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides a method of limiting the presence of a microorganism by contacting the microorganism with polymer-bound metal-containing compositions. The compositions include metal-containing compounds that may be prepared by reacting or polymerizing metal-containing monomers. The microorganism may be present in a liquid that is contacted with the polymer-bound metal-containing composition. Alternatively, the microorganism may be present in a solid that is contacted with the polymer-bound metal-containing composition.

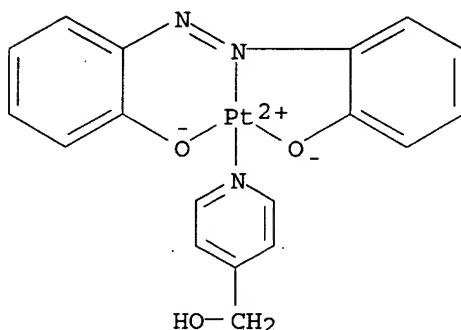
IT 147361-10-2P 222989-09-5P  
 (limiting presence of microorganisms using polymer-bound metal-containing compns.)

RN 147361-10-2 USPATFULL

CN Platinum, [[2,2'-(azo- $\kappa$ N)bis[phenolato- $\kappa$ O]](2-)](4-ethenylpyridine)-, (SP-4-2)- (9CI) (CA INDEX NAME)



RN 222989-09-5 USPATFULL

CN Platinum, [[2,2'-(azo- $\kappa$ N)bis[phenolato- $\kappa$ O]](2-)](4-pyridinemethanol- $\kappa$ N1)-, (SP-4-2)- (9CI) (CA INDEX NAME)

L84 ANSWER 68 OF 105 USPATFULL on STN

ACCESSION NUMBER: 2002:69739 USPATFULL

TITLE: Toner for developing electrostatic image, image forming method and process cartridge

INVENTOR(S): Tomiyama, Koichi, Numazu, JAPAN  
Kohtaki, Takaaki, Mishima, JAPAN  
Ohno, Manabu, Numazu, JAPAN  
Unno, Makoto, Tokyo, JAPAN  
Mikuriya, Yushi, Numazu, JAPAN  
Okubo, Nobuyuki, Yokohama, JAPAN  
Doujo, Tadashi, Numazu, JAPAN  
Suzuki, Shunji, Tokyo, JAPAN

PATENT ASSIGNEE(S): Canon Kabushiki Kaisha, Tokyo, JAPAN (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6365314	B1	20020402
APPLICATION INFO.:	US 1999-457138		19991209 (9)
RELATED APPLN. INFO.:	Division of Ser. No. US 1997-862353, filed on 23 May 1997, now patented, Pat. No. US 6090515 Continuation-in-part of Ser. No. US 1995-436823, filed on 8 May 1995, now abandoned		

NUMBER DATE

PRIORITY INFORMATION: JP 1994-123303 19940513  
DOCUMENT TYPE: Utility  
FILE SEGMENT: GRANTED  
PRIMARY EXAMINER: Rodee, Christopher  
LEGAL REPRESENTATIVE: Fitzpatrick, Cella, Harper & Scinto  
NUMBER OF CLAIMS: 35  
EXEMPLARY CLAIM: 1  
NUMBER OF DRAWINGS: 5 Drawing Figure(s); 4 Drawing Page(s)  
LINE COUNT: 1937

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A toner for developing electrostatic images. having a uniform composition and uniform performances over varying sizes of toner particles is constituted by (a) a binder resin, (b) a long-chain alkyl compound and (c) a specific azo-type iron complex. The long-chain alkyl compound is represented by the following formula (1), (2) or (3):

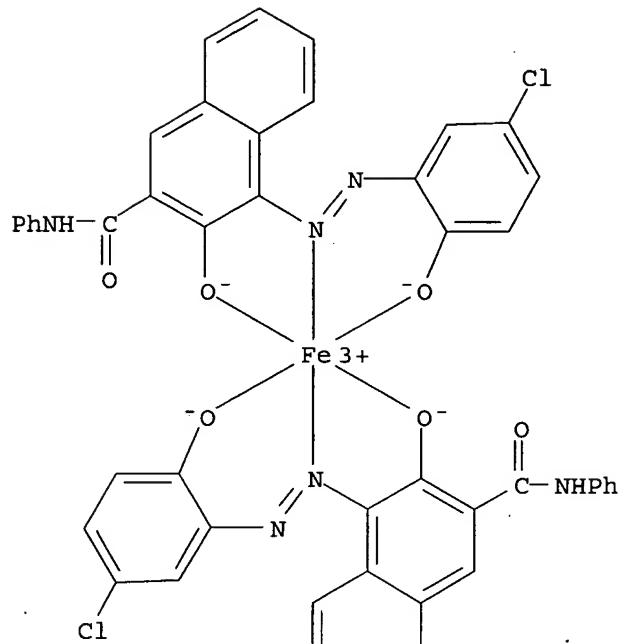
CH.<sub>sub.3.paren open-st.CH.sub.2.paren close-st..sub.x</sub>CH.<sub>sub.2OH</sub> (1),

##STR1## CH.<sub>sub.3.paren open-st.CH.sub.2.paren close-st..sub.y</sub>CH.<sub>sub.2COOH</sub> (3),

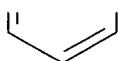
wherein x and y independently denote an average value in the range of 35-150.

IT 104815-18-1 106616-48-2 119029-85-5  
125304-21-4 131494-75-2 163669-67-8  
163756-19-2 163756-22-7 174304-81-5  
174304-82-6 174304-83-7 174304-84-8  
174304-85-9 174304-86-0 174304-87-1  
174304-88-2  
(contained in electrostatog. toner for image formation)  
RN 104815-18-1 USPATFULL  
CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-3-(hydroxy- $\kappa$ O)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)

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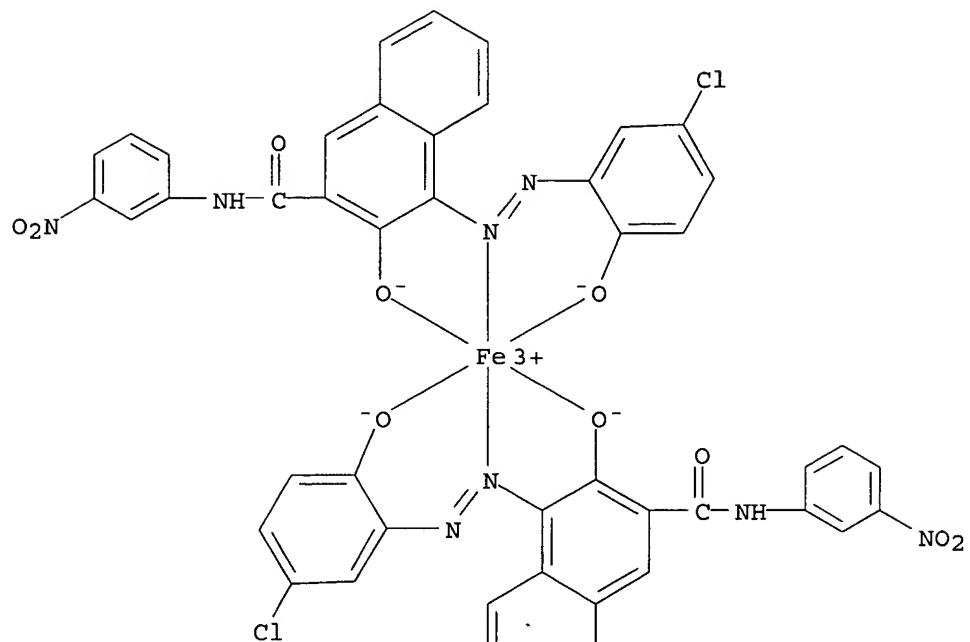
PAGE 2-A



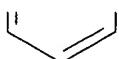
RN 106616-48-2 USPATFULL

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-(3-nitrophenyl)-2-naphthalenecarboxamido(2-)]-, ammonium (9CI) (CA INDEX NAME)

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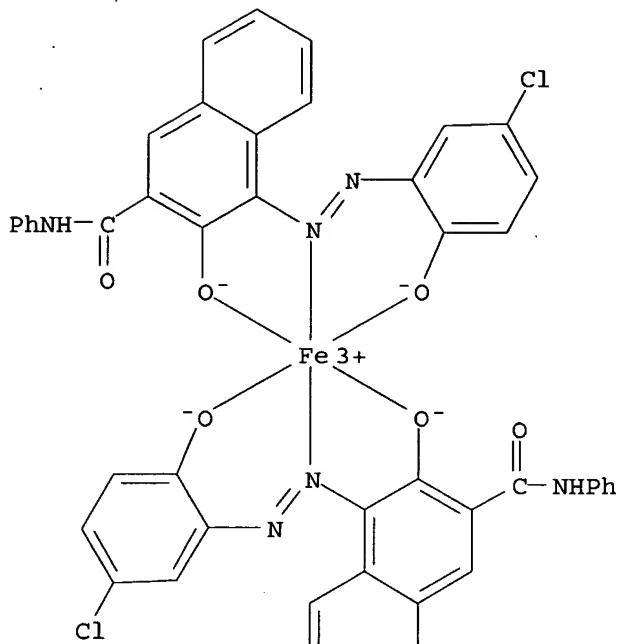
PAGE 2-A



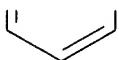
RN 119029-85-5 USPATFULL

CN Ferrate(1-), bis[4-[{5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-3-(hydroxy- $\kappa$ O)-N-phenyl-2-naphthalenecarboxamido(2-)]-, hydrogen  
(9CI) (CA INDEX NAME)

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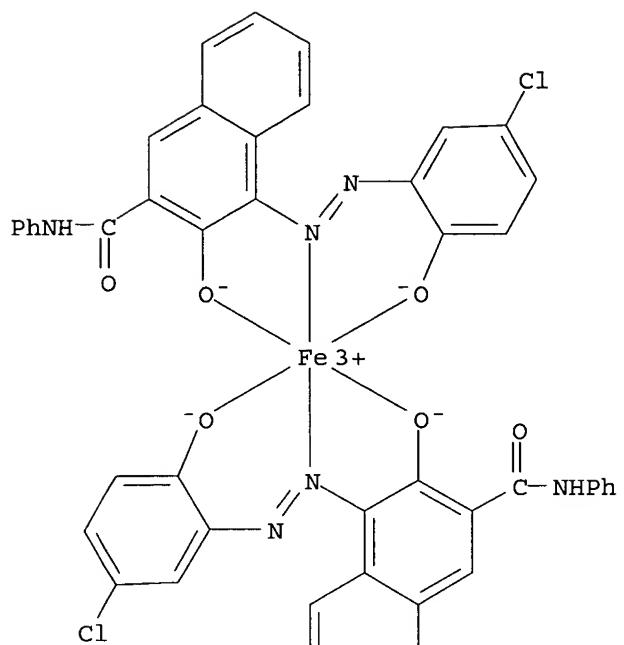
PAGE 2-A



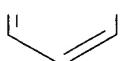
RN 125304-21-4 USPATFULL

CN Ferrate(1-), bis[4-[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-3-(hydroxy- $\kappa$ O)-N-phenyl-2-naphthalenecarboxamido(2-)]-, sodium (9CI) (CA INDEX NAME)

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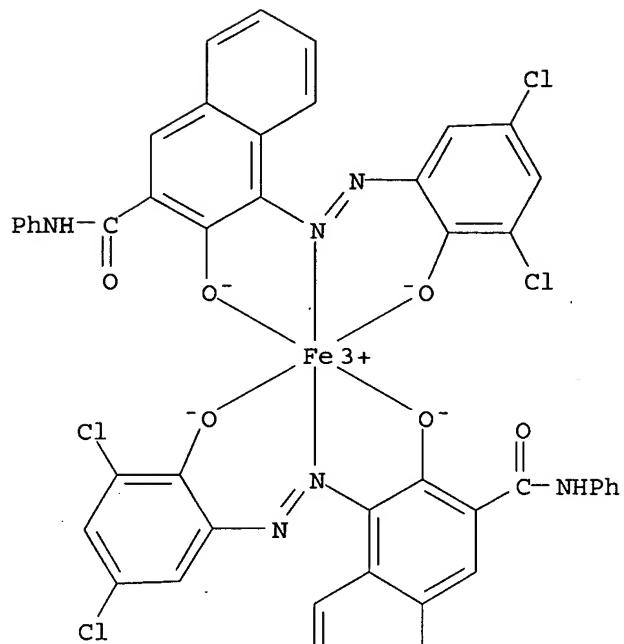


●  $\text{Na}^+$

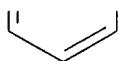
RN 131494-75-2 USPATFULL

CN Ferrate(1-), bis[4-[3,5-dichloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-3-(hydroxy- $\kappa$ O)-N-phenyl-2-naphthalene carboxamido(2-) ]-, sodium (9CI) (CA INDEX NAME)

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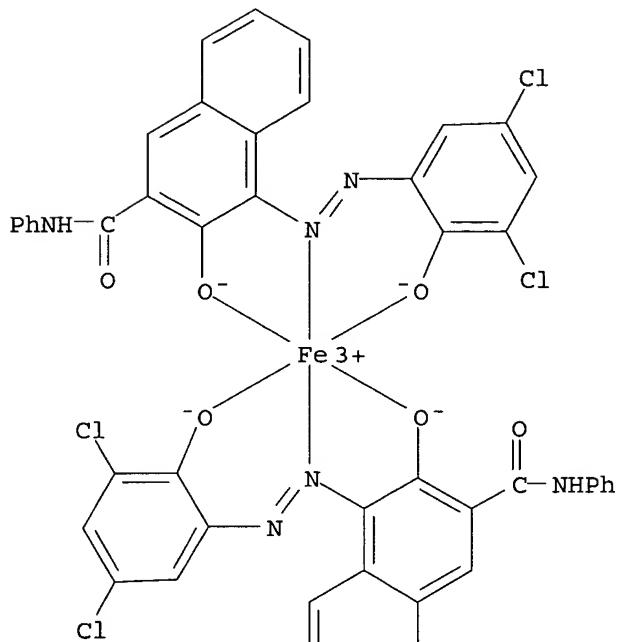
PAGE 2-A

● Na<sup>+</sup>

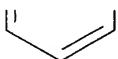
RN 163669-67-8 USPATFULL

CN Ferrate(1-), bis[4-[3,5-dichloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-3-(hydroxy- $\kappa$ O)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)

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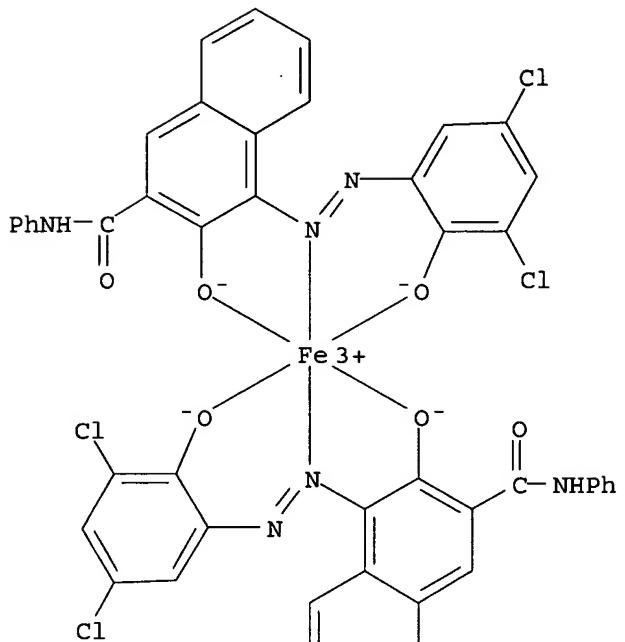
PAGE 2-A



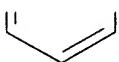
RN 163756-19-2 USPATFULL

CN Ferrate(1-) , bis[4-[3,5-dichloro-2-(hydroxy- $\kappa$ O)phenyl]azo-  
 $\kappa$ N1]-3-(hydroxy- $\kappa$ O)-N-phenyl-2-naphthalenecarboxamidato(2-)]-  
, hydrogen (9CI) (CA INDEX NAME)

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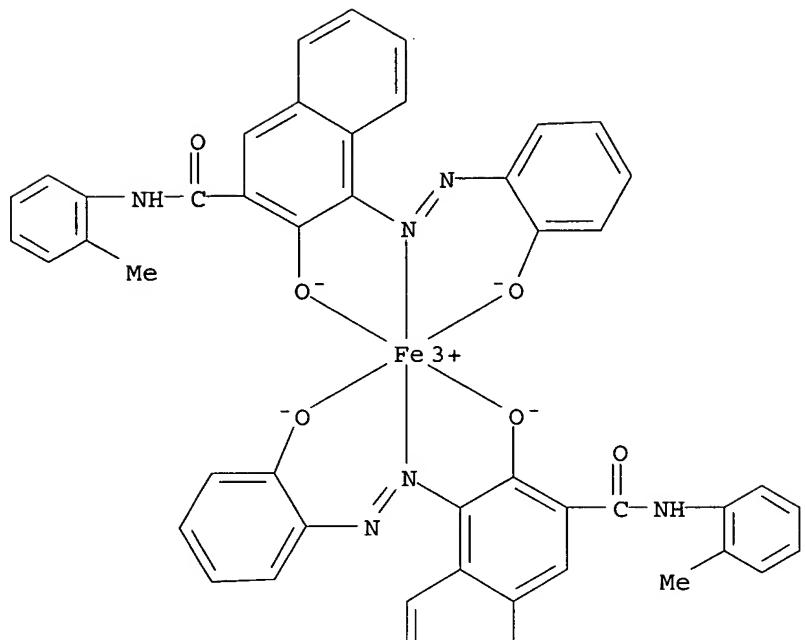


● H<sup>+</sup>

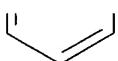
RN 163756-22-7 USPATFULL

CN Ferrate(1-), bis[3-(hydroxy-κO)-4-[[2-(hydroxy-κO)phenyl]azo-κN1]-N-(2-methylphenyl)-2-naphthalenecarboxamido(2-)]-, ammonium  
(9CI) (CA INDEX NAME)

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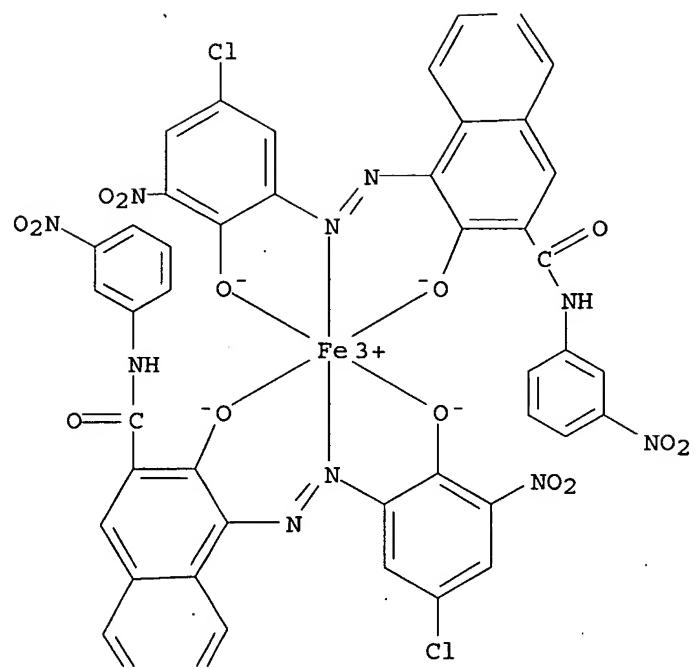


RN 174304-81-5 USPATFULL

CN Ferrate(1-), bis[4-[(5-chloro-2-hydroxy-3-nitrophenyl)azo]-3-hydroxy-N-(3-nitrophenyl)-2-naphthalenecarboxamido(2-)]-, sodium (9CI) (CA INDEX NAME)

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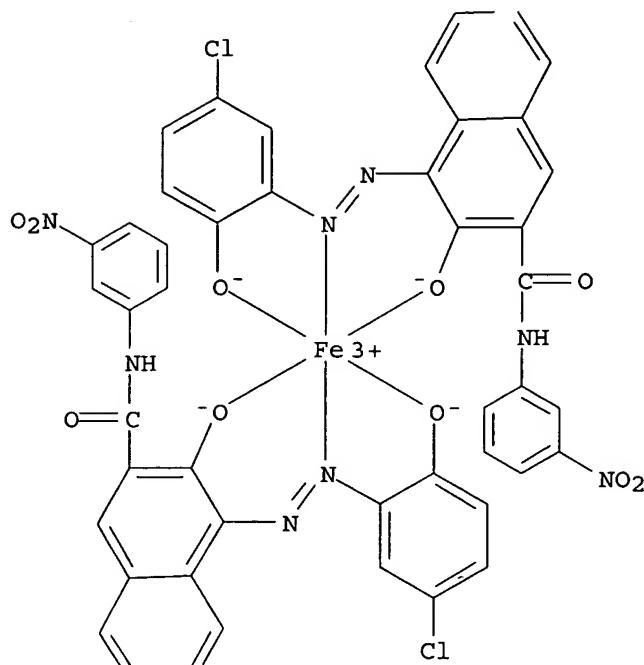
PAGE 3-A

● Na<sup>+</sup>

RN 174304-82-6 USPATFULL  
CN Ferrate(1-), bis[4-[(5-chloro-2-hydroxyphenyl)azo]-3-hydroxy-N-(3-nitrophenyl)-2-naphthalenecarboxamido(2-)]-, hydrogen (9CI) (CA INDEX NAME)

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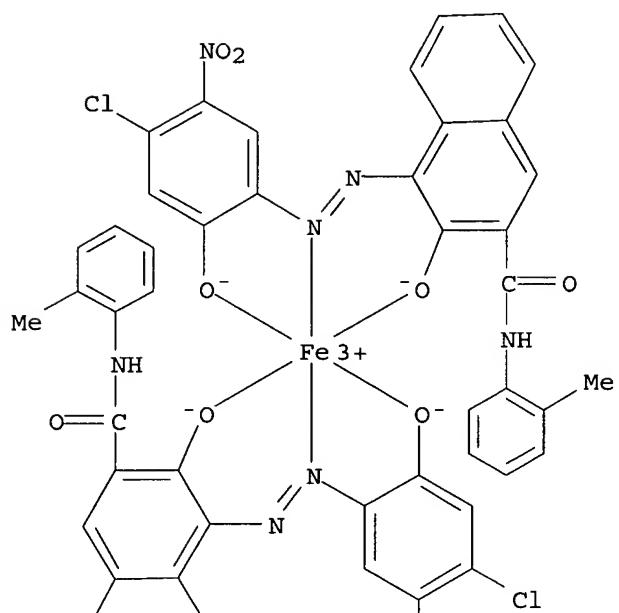
PAGE 3-A



RN 174304-83-7 USPATFULL

CN Ferrate(1-), bis[4-[(4-chloro-2-hydroxy-5-nitrophenyl)azo]-3-hydroxy-N-(2-methylphenyl)-2-naphthalenecarboxamido(2-)]-, sodium (9CI) (CA INDEX NAME)

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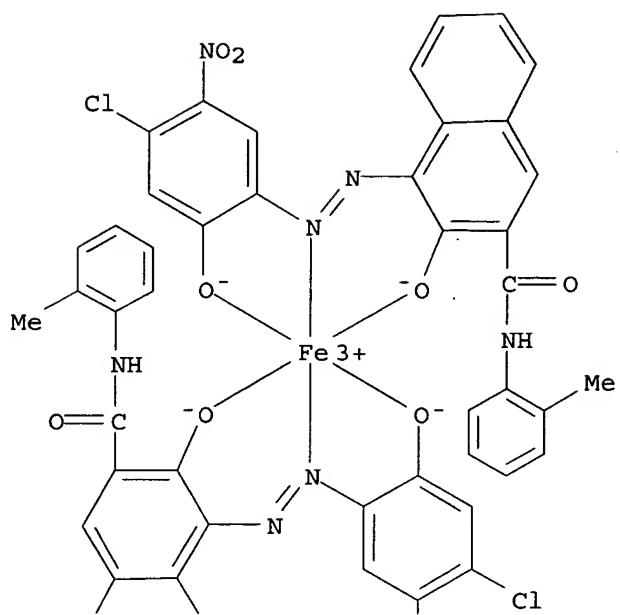
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●  $\text{Na}^+$ 

RN 174304-84-8 USPATFULL

CN Ferrate(1-), bis[4-[(4-chloro-2-hydroxy-5-nitrophenyl)azo]-3-hydroxy-N-(2-methylphenyl)-2-naphthalenecarboxamido(2-)]-, hydrogen (9CI) (CA INDEX NAME)

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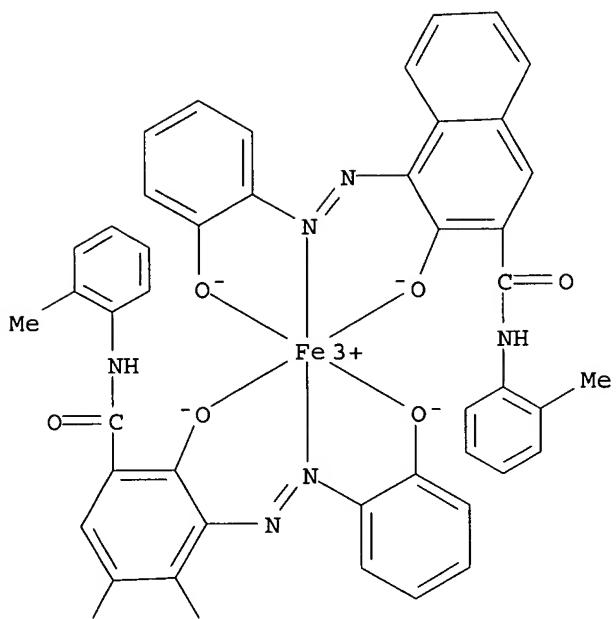
PAGE 2-A



RN 174304-85-9 USPATFULL

CN Ferrate(1-), bis[3-hydroxy-4-[(2-hydroxyphenyl)azo]-N-(2-methylphenyl)-2-naphthalenecarboxamido(2-)]-, sodium (9CI) (CA INDEX NAME)

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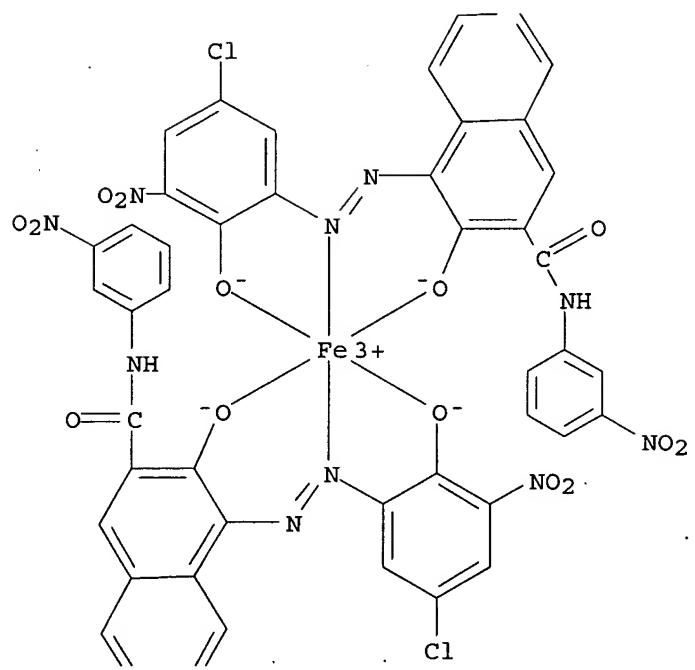


RN 174304-86-0 USPATFULL

CN Ferrate(1-), bis[4-[(5-chloro-2-hydroxy-3-nitrophenyl)azo]-3-hydroxy-N-(3-nitrophenyl)-2-naphthalenecarboxamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)

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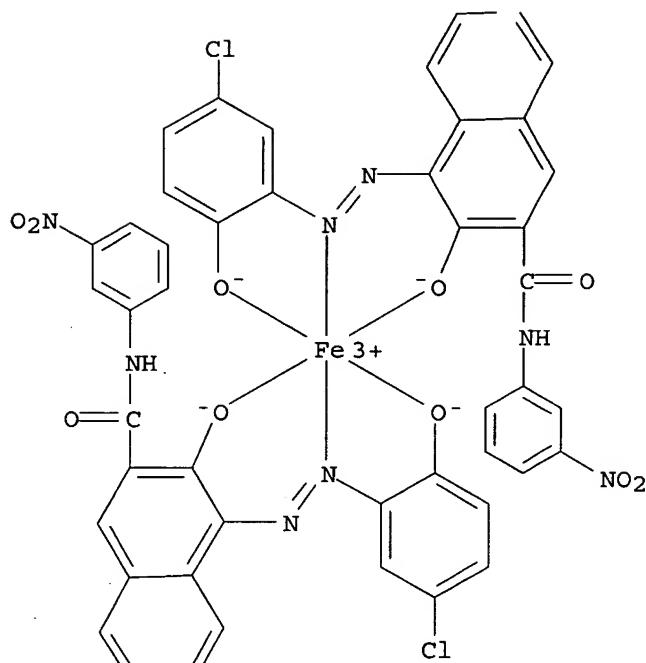
● NH<sub>4</sub><sup>+</sup>

RN 174304-87-1 USPATFULL

CN Ferrate(1-), bis[4-[(5-chloro-2-hydroxyphenyl)azo]-3-hydroxy-N-(3-nitrophenyl)-2-naphthalenecarboxamidato(2-)]-, potassium (9CI) (CA INDEX NAME)

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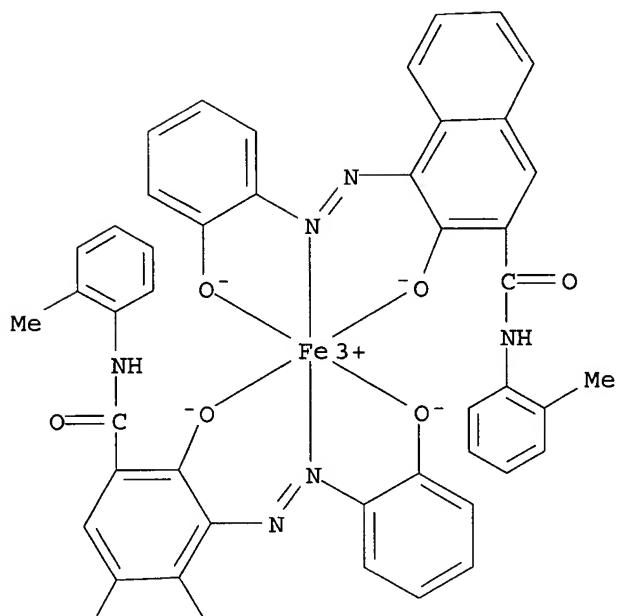
PAGE 3-A

● K+

RN 174304-88-2 USPATFULL

CN Ferrate(1-), bis[3-hydroxy-4-[(2-hydroxyphenyl)azo]-N-(2-methylphenyl)-2-naphthalenecarboxamido(2-)]-, hydrogen (9CI) (CA INDEX NAME)

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● H<sup>+</sup>

L84 ANSWER 69 OF 105 USPATFULL on STN  
 ACCESSION NUMBER: 2001:91487 USPATFULL  
 TITLE: Toner for electrophotography  
 INVENTOR(S): Suwa, Yoshihito, Shizuoka-shi, Japan  
 Okuyama, Hisashi, Kyoto, Japan  
 Horibe, Yasumasa, Kyoto, Japan

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2001003636	A1	20010614
	US 6432600	B2	20020813
APPLICATION INFO.:	US 2000-730736	A1	20001207 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1999-352412	19991210
DOCUMENT TYPE:	Utility	

FILE SEGMENT: APPLICATION  
 LEGAL REPRESENTATIVE: NEXON & VANDERHYE P.C., 1100 North Glebe Rd., 8th Floor, Arlington, VA, 22201-4714  
 NUMBER OF CLAIMS: 11  
 EXEMPLARY CLAIM: 1  
 LINE COUNT: 855

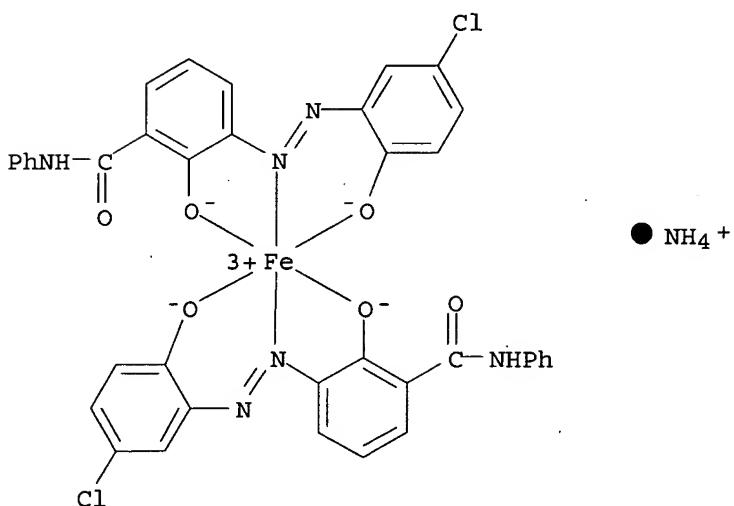
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Toner used for electrophotography includes a polylactic acid type biodegradable resin and a terpene-phenol copolymer. The molar concentration of one of the L-lactic acid units and D-lactic acid units in a lactic acid component of the polylactic acid type biodegradable resin is in the range between about 75 mol % and about 98 mol %. The terpene-phenol copolymer may include at least one composition selected from the group consisting of: (a) cyclic terpene-phenol copolymer, prepared by copolymerizing cyclic terpene and phenol; (b) cyclic terpene/phenol (1:2 molar ratio) addition product, prepared by adding two molecules of phenol to one molecule of cyclic terpene; (c) polycyclic terpene/phenol (1:2 molar ratio) addition product, prepared by a condensation reaction of the cyclic terpene/phenol (1:2 molar ratio) addition product with one of aldehyde and ketone; and (d) polycyclic terpene/phenol (1:1 molar ratio) addition product, prepared by a condensation reaction of a cyclic terpene/phenol (1:1 molar ratio) addition product with one of aldehyde and ketone. The toner of the invention is applicable to a full-color toner.

IT 156108-08-6  
 (T 77; toner for electrophotog. having poly(lactic acid)-type biodegradable resin and terpene-phenol polymer)

RN 156108-08-6 USPATFULL

CN Ferrate(1-), bis[3-[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-2-(hydroxy- $\kappa$ O)-N-phenylbenzamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)



L84 ANSWER 70 OF 105 USPATFULL on STN  
 ACCESSION NUMBER: 2001:93499 USPATFULL  
 TITLE: Method for limiting the growth of microorganisms using metal-containing compounds  
 INVENTOR(S): Landgrebe, Kevin D., Woodbury, MN, United States  
 Shelburne, Charles E., Brooklyn Park, MN, United States

Smith, Terrance P., Woodbury, MN, United States  
 Cuny, Gregory D., Hudson, MA, United States  
**PATENT ASSIGNEE(S) :** 3M Innovative Properties Company, St. Paul, MN, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6248733	B1	20010619
APPLICATION INFO.:	US 1998-4892		19980109 (9)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	GRANTED		
PRIMARY EXAMINER:	Dees, Jose' G.		
ASSISTANT EXAMINER:	Pryor, Alton		
LEGAL REPRESENTATIVE:	Rogers, James A.		
NUMBER OF CLAIMS:	42		
EXEMPLARY CLAIM:	1		
LINE COUNT:	1444		

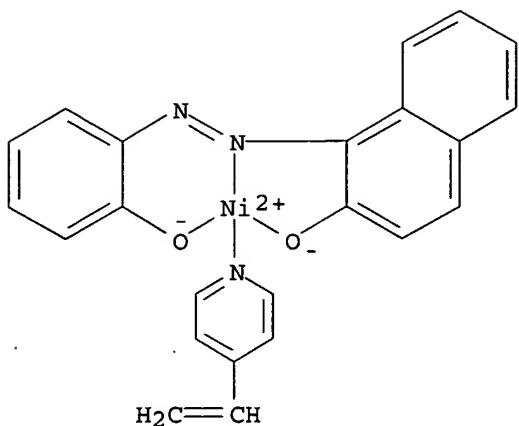
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

**AB** This invention relates to the use of compounds having the general structure: ##STR1##

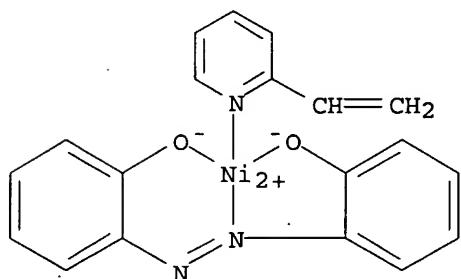
wherein: Z<sub>1</sub> and Z<sub>2</sub> each independently represent an arene nucleus, which has from 5 to 14 ring atoms; G<sub>1</sub> and G<sub>2</sub> each independently represent a metal ligating group; R represents a hydrogen atom, a halogen atom, an alkyl group, an acylamino group, an alkoxy group, a sulfonamido group, an aryl group, a thiol group, an alkylthio group, an arylthio group, an alkylamino group, an arylamino group, an amino group, an alkoxy carbonyl group, an acyloxy group, a nitro group, a cyano group, an alkylsulfonyl group, an arylsulfonyl group, an alkylsulfoxyl group, an arylsulfoxyl group, an aryloxyl group, a hydroxyl group, a thioamido group, a carbamoyl group, a suffamoyl group, a formyl group, an acyl group, a ureido group, an aryloxycarbonyl group, a silyl group, or a sulfoalkoxy group; L<sub>1</sub> represents a nitrogen heterocycle; L<sub>2</sub> represents a monodentate or polydentate (e.g., bidentate) ligand; X represents nitrogen or a methine (CH) group; M is a divalent or polyvalent transition metal ion where the coordination number is at least 4; and k, m, and n are whole numbers less than or equal to 3 as antimicrobial agents to inhibit the growth or replication of microorganisms such as viruses, bacteria, and fungi.

**IT** 147044-74-4P 147312-53-6P 147361-09-9P  
 147361-10-2P 147361-15-7P 147469-42-9P  
 147486-63-3P 148250-53-7P 158680-57-0P  
 163857-99-6P 222989-09-5P 222989-10-8P  
 222989-11-9P 222989-12-0P 222989-13-1P  
 222989-16-4P 231633-24-2P 231633-26-4P  
 231633-27-5P 231633-29-7P 231633-30-0P  
 (preparation as microbicide and virucide)

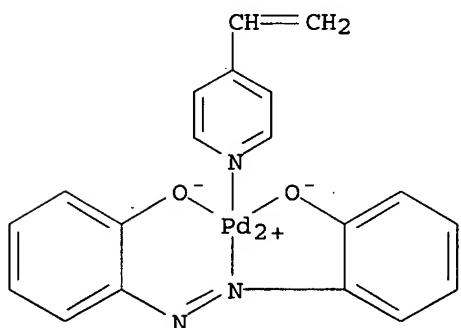
**RN** 147044-74-4 USPATFULL  
**CN** Nickel, (4-ethenylpyridine) [1-[[2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-2-naphthalenolato(2-) - $\kappa$ O] - (9CI) (CA INDEX NAME)



RN 147312-53-6 USPATFULL

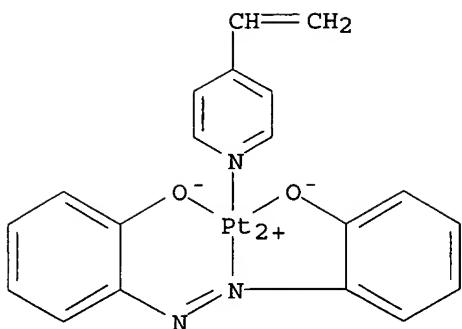
CN Nickel, [[2,2'-(azo- $\kappa$ N)bis[phenolato- $\kappa$ O]](2-)](2-ethenylpyridine)- (9CI) (CA INDEX NAME)

RN 147361-09-9 USPATFULL

CN Palladium, [[2,2'-(azo- $\kappa$ N)bis[phenolato- $\kappa$ O]](2-)](4-ethenylpyridine)-, (SP-4-2)- (9CI) (CA INDEX NAME)

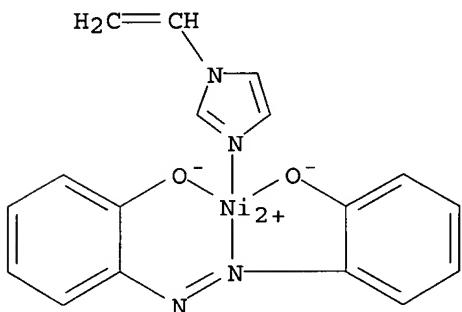
RN 147361-10-2 USPATFULL

CN Platinum, [[2,2'-(azo- $\kappa$ N)bis[phenolato- $\kappa$ O]](2-)](4-ethenylpyridine)-, (SP-4-2)- (9CI) (CA INDEX NAME)



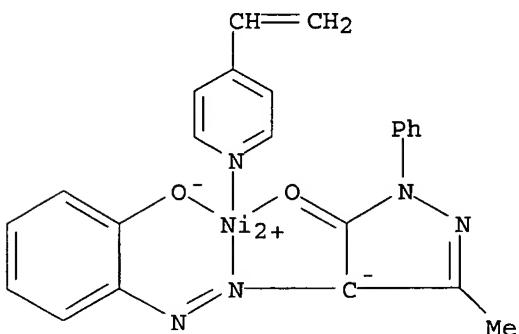
RN 147361-15-7 USPATFULL

CN Nickel, [[2,2'-(*azo-κN*)bis[phenolato- $\kappa\text{O}$ ]] (2-)] (1-ethenyl-1*H*-imidazole- $\kappa\text{N}3$ ) - (9CI) (CA INDEX NAME)



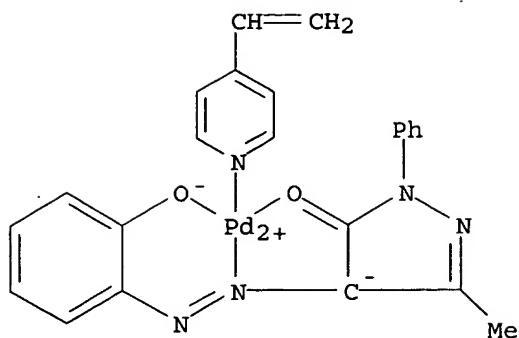
RN 147469-42-9 USPATFULL

CN Nickel, [2,4-dihydro-4-[2-(hydroxy- $\kappa\text{O}$ )phenyl]azo- $\kappa\text{N}1$ ]-5-methyl-2-phenyl-3*H*-pyrazol-3-onato(2-)- $\kappa\text{O}3$ ] (4-ethenylpyridine) - (9CI) (CA INDEX NAME)

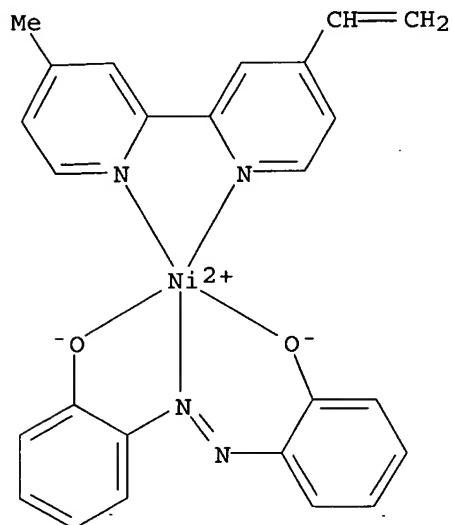


RN 147486-63-3 USPATFULL

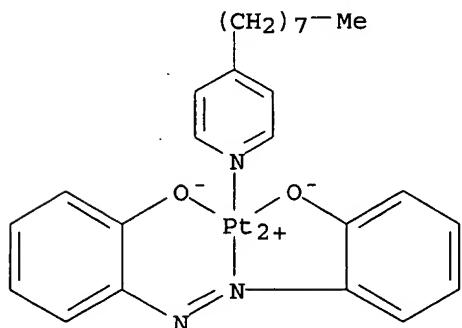
CN Palladium, [2,4-dihydro-4-[2-(hydroxy- $\kappa\text{O}$ )phenyl]azo- $\kappa\text{N}1$ ]-5-methyl-2-phenyl-3*H*-pyrazol-3-onato(2-)- $\kappa\text{O}3$ ] (4-ethenylpyridine) -, (SP-4-2) - (9CI) (CA INDEX NAME)



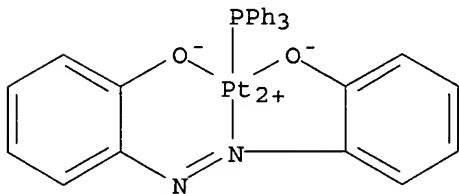
RN 148250-53-7 USPATFULL

CN Nickel, [ [2,2'-(azo- $\kappa$ N)bis[phenolato- $\kappa$ O]](2-) ] (4-ethenyl-4'-methyl-2,2'-bipyridine- $\kappa$ N1, $\kappa$ N1') - (9CI) (CA INDEX NAME)

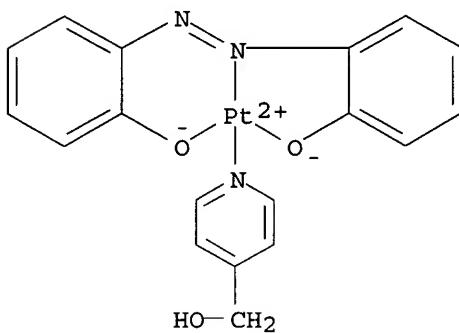
RN 158680-57-0 USPATFULL

CN Platinum, [ [2,2'-(azo- $\kappa$ N)bis[phenolato- $\kappa$ O]](2-) ] (4-octylpyridine)-, (SP-4-2)- (9CI) (CA INDEX NAME)

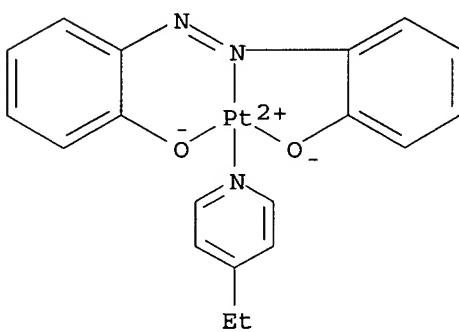
RN 163857-99-6 USPATFULL  
 CN Platinum, [[2,2'-(azo- $\kappa$ N)bis[phenolato- $\kappa$ O]](2-)](triphenylphosphine)-, (SP-4-4)- (9CI) (CA INDEX NAME)



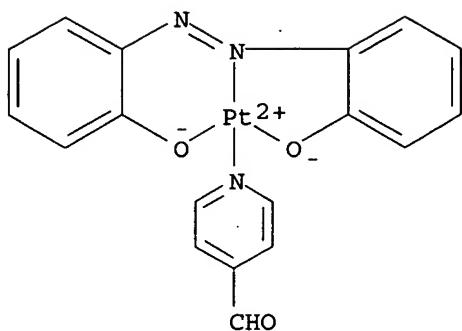
RN 222989-09-5 USPATFULL  
 CN Platinum, [[2,2'-(azo- $\kappa$ N)bis[phenolato- $\kappa$ O]](2-)](4-pyridinemethanol- $\kappa$ N1)-, (SP-4-2)- (9CI) (CA INDEX NAME)



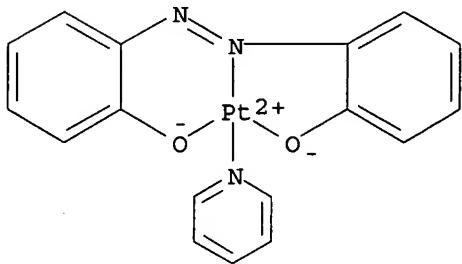
RN 222989-10-8 USPATFULL  
 CN Platinum, [[2,2'-(azo- $\kappa$ N)bis[phenolato- $\kappa$ O]](2-)](4-ethylpyridine)-, (SP-4-2)- (9CI) (CA INDEX NAME)



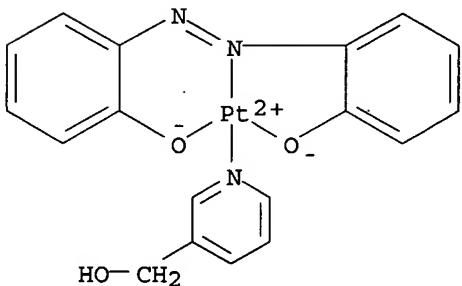
RN 222989-11-9 USPATFULL  
 CN Platinum, [[2,2'-(azo- $\kappa$ N)bis[phenolato- $\kappa$ O]](2-)](4-pyridinecarboxaldehyde- $\kappa$ N1)-, (SP-4-2)- (9CI) (CA INDEX NAME)



RN 222989-12-0 USPATFULL

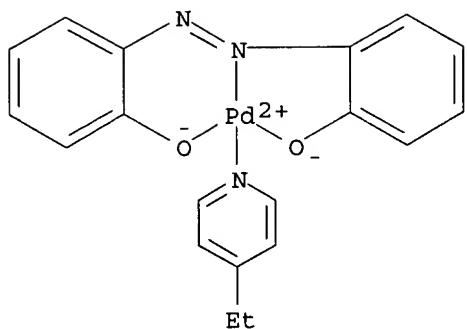
CN Platinum, [[2,2'-(azobis[phenolato- $\kappa$ O]) (2-)] (pyridine)-, (SP-4-2)- (9CI) (CA INDEX NAME)

RN 222989-13-1 USPATFULL

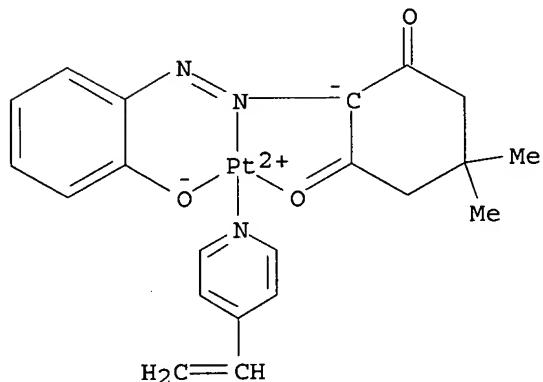
CN Platinum, [[2,2'-(azobis[phenolato- $\kappa$ O]) (2-)] (3-pyridinemethanol- $\kappa$ N1)-, (SP-4-2)- (9CI) (CA INDEX NAME)

RN 222989-16-4 USPATFULL

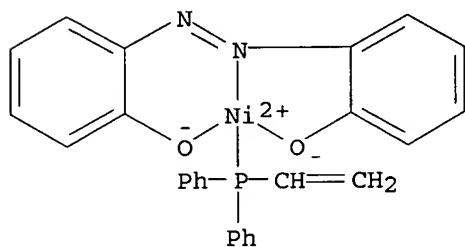
CN Palladium, [[2,2'-(azobis[phenolato- $\kappa$ O]) (2-)] (4-ethylpyridine)-, (SP-4-2)- (9CI) (CA INDEX NAME)



RN 231633-24-2 USPATFULL

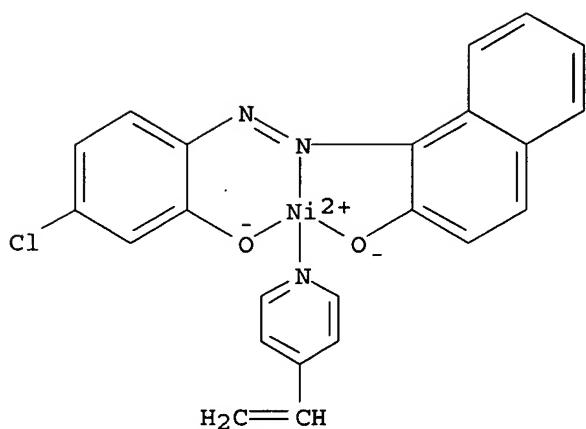
CN Platinum, (4-ethenylpyridine) [2- [[2- (hydroxy- $\kappa\text{O}$ ) phenyl] azo- $\kappa\text{N}1$ ] -5,5-dimethyl-1,3-cyclohexanedionato(2-) - $\kappa\text{O}$ ] -, (SP-4-2)- (9CI) (CA INDEX NAME)

RN 231633-26-4 USPATFULL

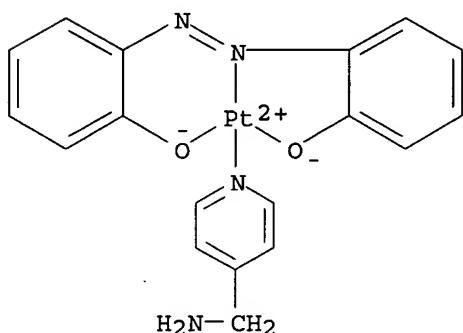
CN Nickel, [[2,2'-(azo- $\kappa\text{N}$ )bis[phenolato- $\kappa\text{O}$ ]] (2-)] (ethenyldiphenylphosphine)- (9CI) (CA INDEX NAME)

RN 231633-27-5 USPATFULL

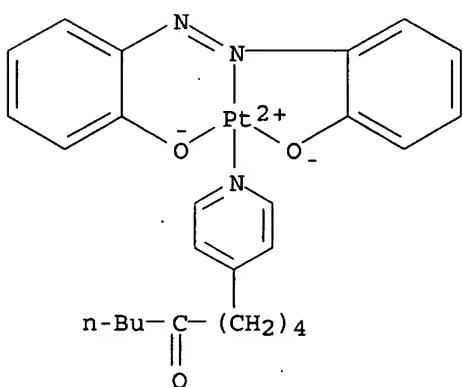
CN Nickel, [1- [[4-chloro-2- (hydroxy- $\kappa\text{O}$ ) phenyl] azo- $\kappa\text{N}1$ ] -2-naphthalenolato(2-) - $\kappa\text{O}$ ] (4-ethenylpyridine)- (9CI) (CA INDEX NAME)



RN 231633-29-7 USPATFULL

CN Platinum, [[2,2'-(azo- $\kappa$ N)bis[phenolato- $\kappa$ O]](2-)](4-pyridinemethanamine- $\kappa$ N1)-, (SP-4-2)- (9CI) (CA INDEX NAME)

RN 231633-30-0 USPATFULL

CN Platinum, [[2,2'-(azo- $\kappa$ N)bis[phenolato- $\kappa$ O]](2-)][1-(4-pyridinyl- $\kappa$ N)-5-nonenone]-, (SP-4-2)- (9CI) (CA INDEX NAME)

L84 ANSWER 71 OF 105 USPATFULL on STN

ACCESSION NUMBER: 2000:91670 USPATFULL  
 TITLE: Toner for developing electrostatic image, image forming method and process cartridge  
 INVENTOR(S): Tomiyama, Koichi, Yokohama, Japan  
 Kohtaki, Takaaki, Yokohama, Japan  
 Ohno, Manabu, Funabashi, Japan  
 Unno, Makoto, Tokyo, Japan  
 Mikuriya, Yushi, Kawasaki, Japan  
 Okubo, Nobuyuki, Yokohama, Japan  
 Doujo, Tadashi, Kawasaki, Japan  
 Suzuki, Shunji, Tokyo, Japan  
 PATENT ASSIGNEE(S): Canon Kabushiki Kaisha, Tokyo, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6090515		20000718
APPLICATION INFO.:	US 1997-862353		19970523 (8)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1995-436823, filed on 8 May 1995, now abandoned		

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1994-123303	19940513
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	Granted	
PRIMARY EXAMINER:	Rodee, Christopher D.	
LEGAL REPRESENTATIVE:	Fitzpatrick, Cella, Harper & Scinto	
NUMBER OF CLAIMS:	38	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	5 Drawing Figure(s); 4 Drawing Page(s)	
LINE COUNT:	2514	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

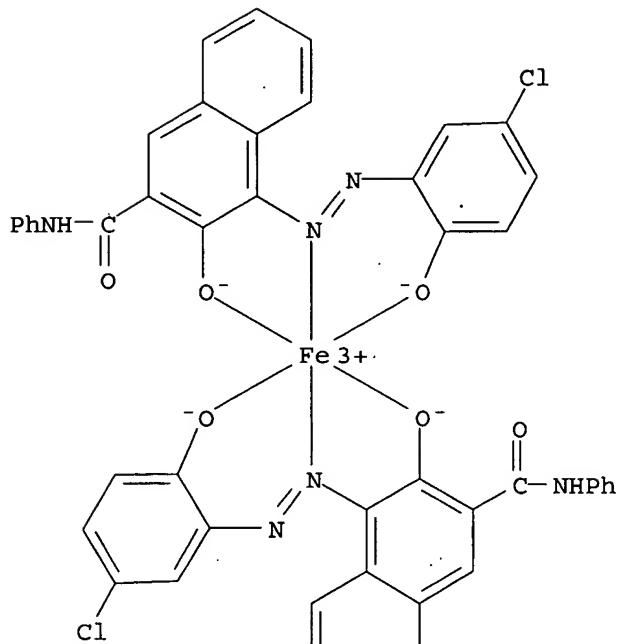
AB A toner for developing electrostatic images includes a binder resin, a specific long-chain alkyl compound and a specific azo iron complex. The long-chain alkyl compound contains a terminal --OH or --COOH group and from about 35 to 150 (-CH<sub>2</sub>-) groups. The azo iron complex has a cation including 75-98 mol. % of ammonium ion and another ion which is hydrogen, sodium, potassium or mixtures thereof.

IT 104815-18-1D, solid solution containing 106586-16-7D, solid solution containing 106616-48-2D, solid solution containing 119029-85-5D, solid solution containing 125304-21-4D, solid solution containing 131494-75-2D, solid solution containing 163669-67-8D, solid solution containing 163756-19-2D, solid solution containing 163756-22-7D, solid solution containing 284490-04-6D, solid solution containing 284490-05-7D, solid solution containing 284490-10-4D, solid solution containing 284490-11-5D, solid solution containing (charge control agent for electrophotog toner)

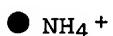
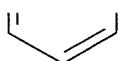
RN 104815-18-1 USPATFULL

CN Ferrate(1-), bis[4-[(5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-3-(hydroxy- $\kappa$ O)-N-phenyl-2-naphthalenecarboxamido(2-)]-, ammonium (9CI) (CA INDEX NAME)

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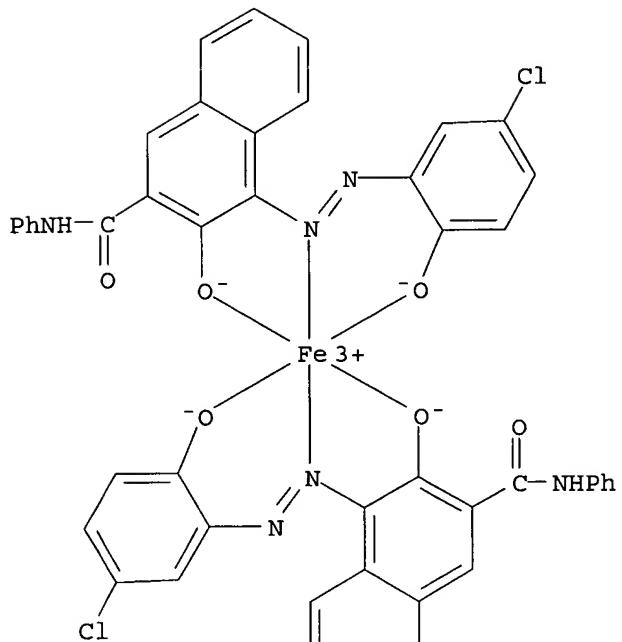
PAGE 2-A



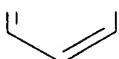
RN 106586-16-7 USPATFULL

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-3-(hydroxy- $\kappa$ O)-N-phenyl-2-naphthalenecarboxamido(2-)]-, potassium  
(9CI) (CA INDEX NAME)

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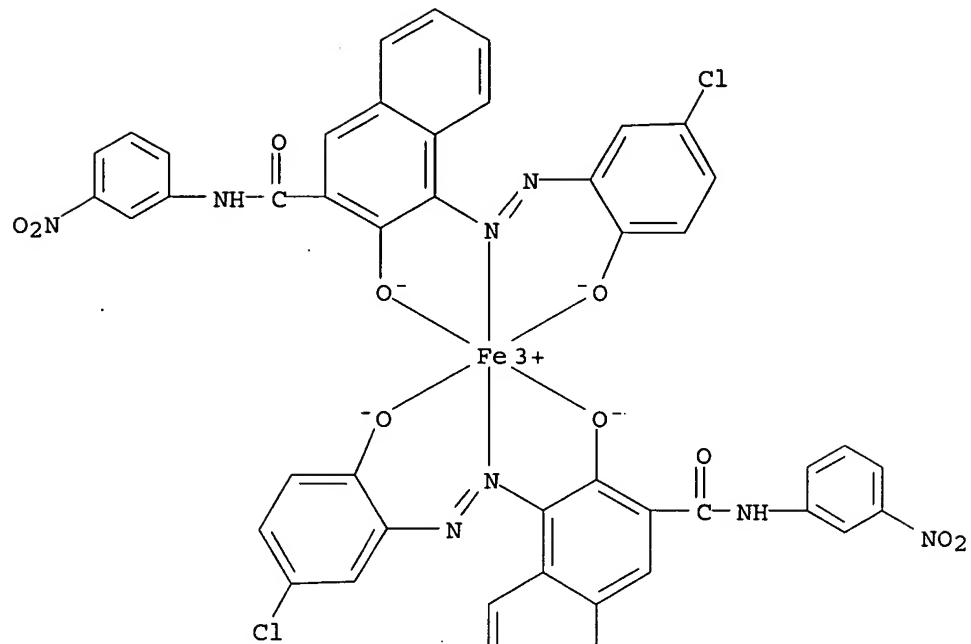


● K+

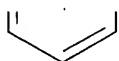
RN 106616-48-2 USPATFULL

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-(3-nitrophenyl)-2-naphthalenecarboxamato(2-)]-, ammonium (9CI) (CA INDEX NAME)

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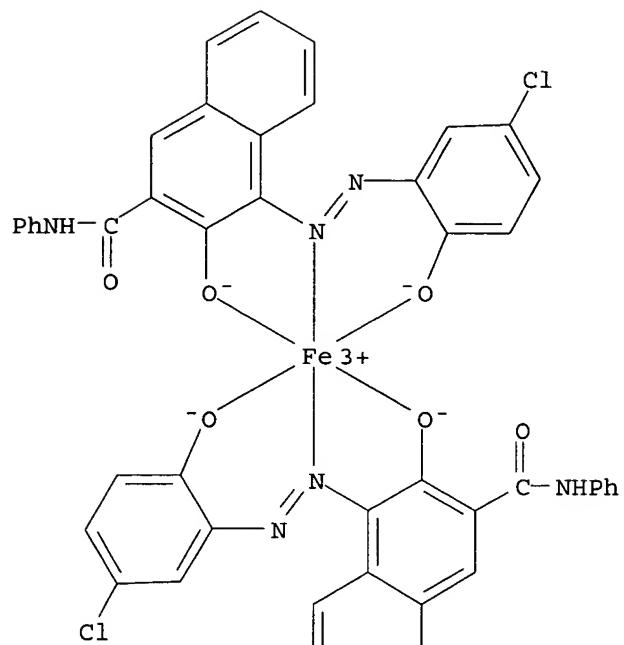


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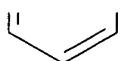


RN 119029-85-5 USPATFULL  
 CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy- $\kappa\text{O}$ )phenyl]azo- $\kappa\text{N}1]-3-(hydroxy- $\kappa\text{O}$ )-N-phenyl-2-naphthalenecarboxamido(2-)]-, hydrogen (9CI) (CA INDEX NAME)$

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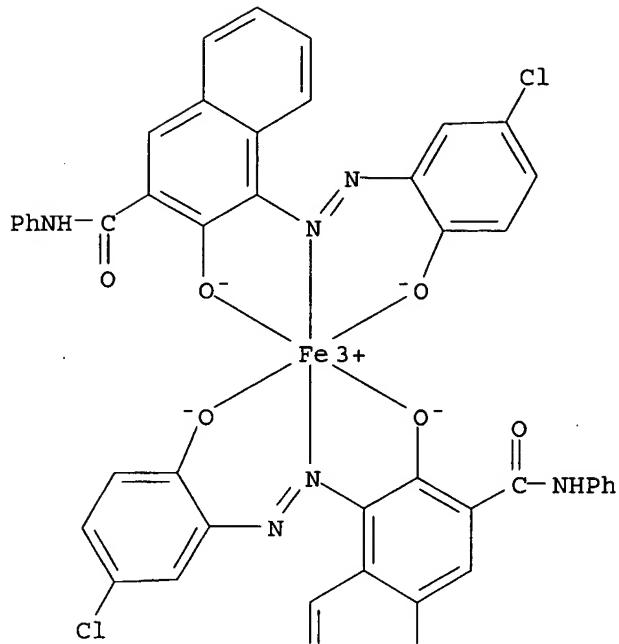


● H<sup>+</sup>

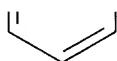
RN 125304-21-4 USPATFULL

CN Ferrate(1-), bis[4-[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-3-(hydroxy- $\kappa$ O)-N-phenyl-2-naphthalenecarboxamido(2-)]-, sodium  
(9CI) (CA INDEX NAME)

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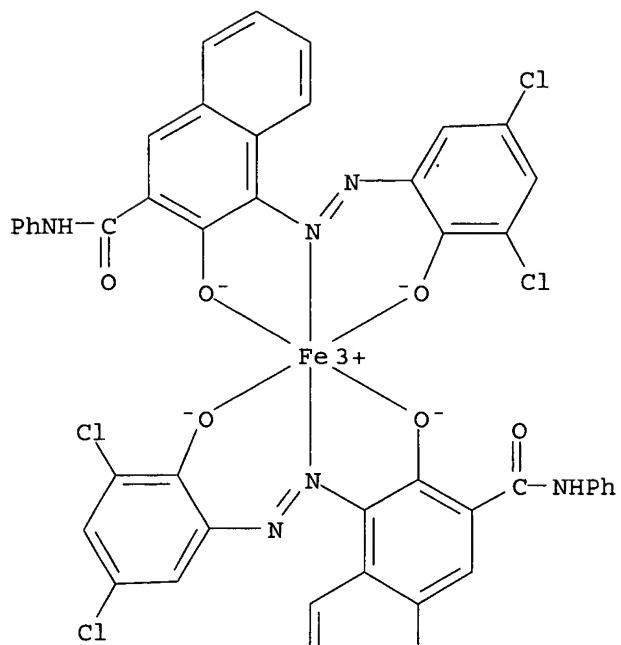
PAGE 2-A

● Na<sup>+</sup>

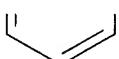
RN 131494-75-2 USPATFULL

CN Ferrate(1-), bis[4-[[3,5-dichloro-2-(hydroxy-κO)phenyl]azo-  
 κN1]-3-(hydroxy-κO)-N-phenyl-2-naphthalene carboxamido(2-)]-,  
 sodium (9CI) (CA INDEX NAME)

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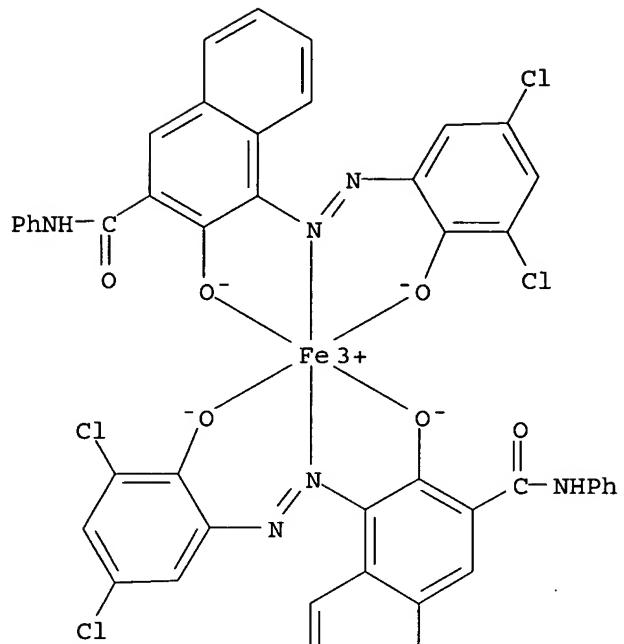
PAGE 2-A

● Na<sup>+</sup>

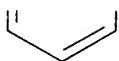
RN 163669-67-8 USPATFULL

CN Ferrate(1-) , bis[4-[{3,5-dichloro-2-(hydroxy-κO)phenyl}azo-  
κN1]-3-(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamido(2-)]-  
, ammonium (9CI) (CA INDEX NAME)

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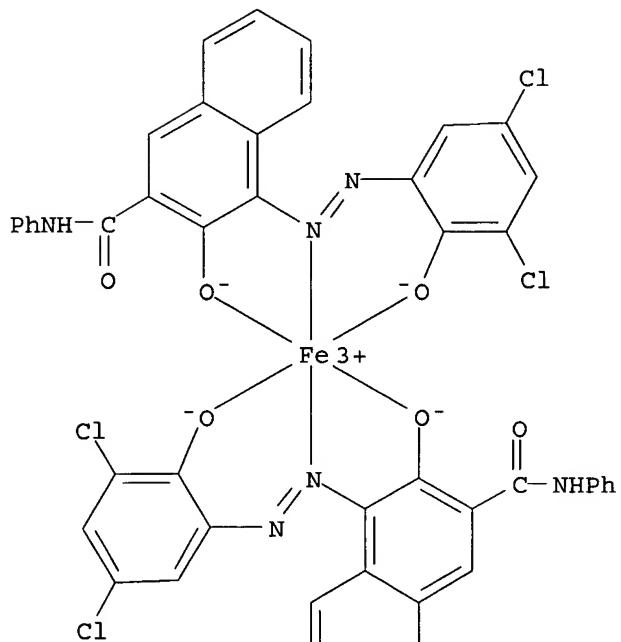


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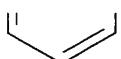


RN 163756-19-2 USPATFULL  
 CN Ferrate(1-), bis[4-[[3,5-dichloro-2-(hydroxy-κO)phenyl]azo-  
 κN1]-3-(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamido(2-)]-  
 , hydrogen (9CI) (CA INDEX NAME)

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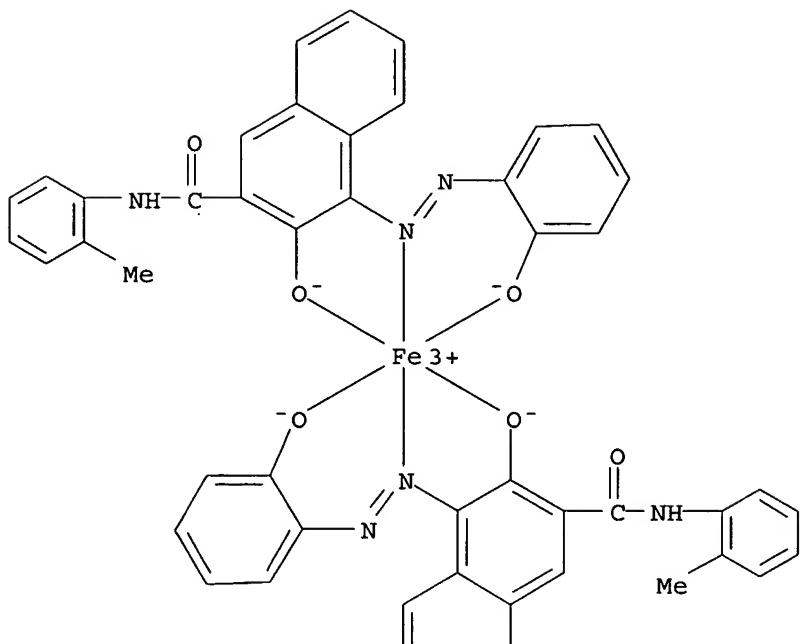
PAGE 2-A



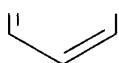
RN 163756-22-7 USPATFULL

CN Ferrate(1-), bis [3-(hydroxy- $\kappa\text{O}$ ) -4- [[2-(hydroxy- $\kappa\text{O}$ )phenyl]azo- $\kappa\text{N1}]$ -N-(2-methylphenyl)-2-naphthalenecarboxamidato(2-)]-, ammonium  
(9CI) (CA INDEX NAME)

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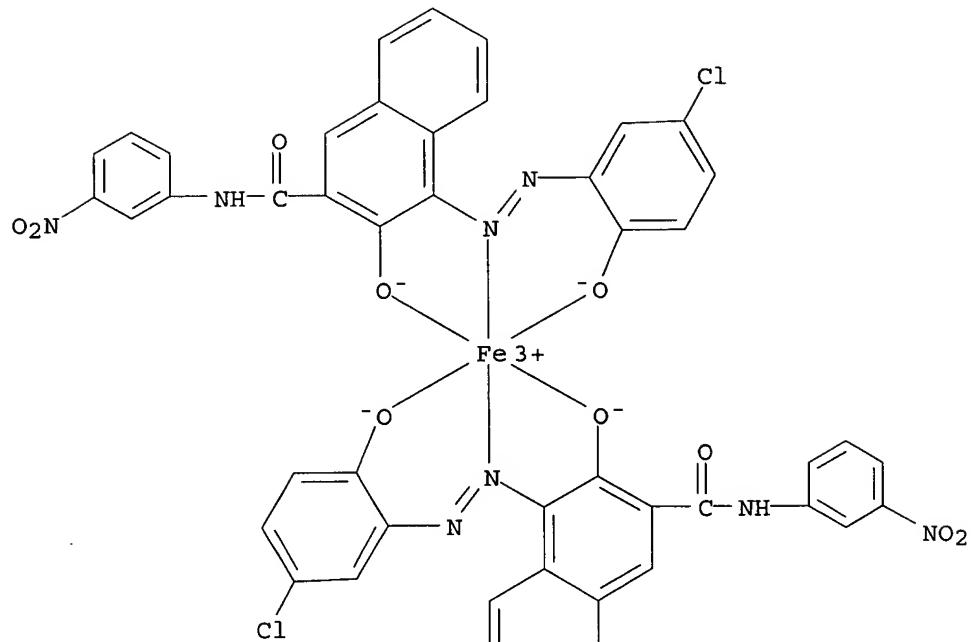
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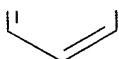
RN 284490-04-6 USPATFULL

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-3-(hydroxy- $\kappa$ O)-N-(3-nitrophenyl)-2-naphthalenecarboxamidato(2-)]-, potassium (9CI) (CA INDEX NAME)

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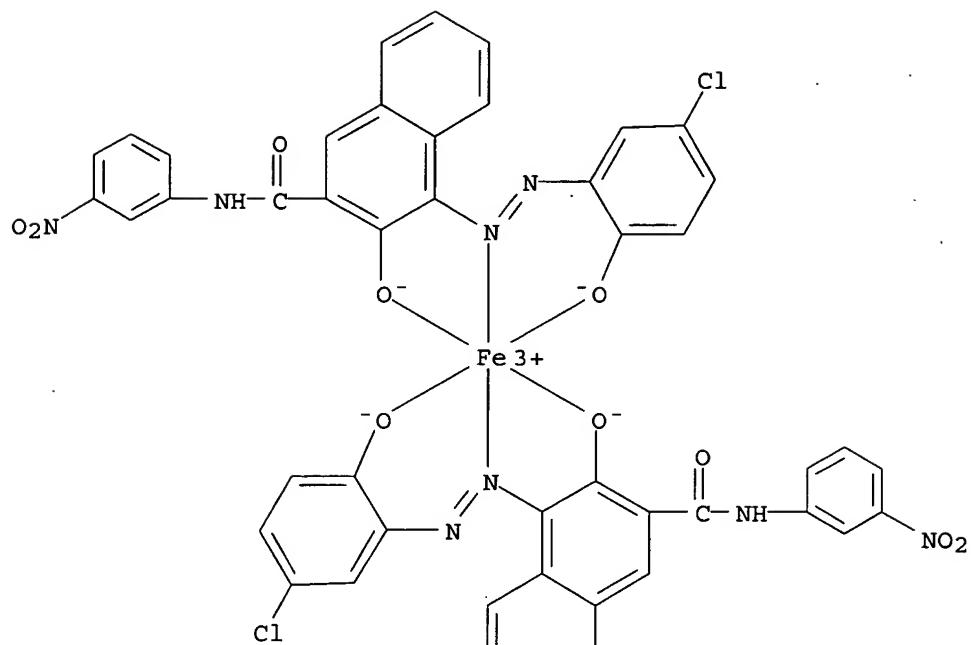


●  $\text{K}^+$

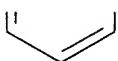
RN 284490-05-7 USPATFULL

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy- $\kappa\text{O}$ )phenyl]azo- $\kappa\text{N1}$ ]-3-(hydroxy- $\kappa\text{O}$ )-N-(3-nitrophenyl)-2-naphthalenecarboxamido(2-)]-, hydrogen (9CI) (CA INDEX NAME)

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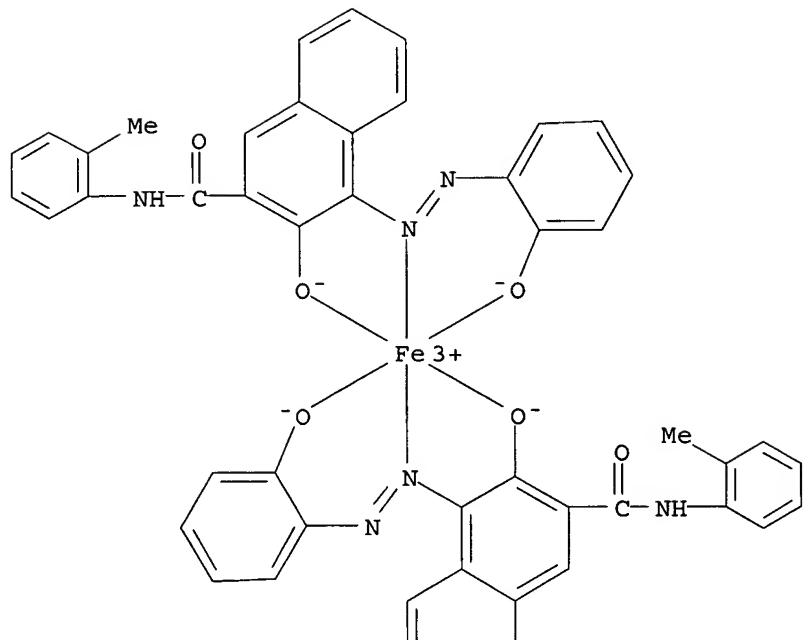
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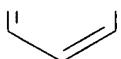
RN 284490-10-4 USPATFULL

CN Ferrate(1-), bis[3-(hydroxy- $\kappa$ O)-4-[[2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-N-(2-methylphenyl)-2-naphthalenecarboxamido(2-)]-, sodium  
(9CI) (CA INDEX NAME)

PAGE 1-A



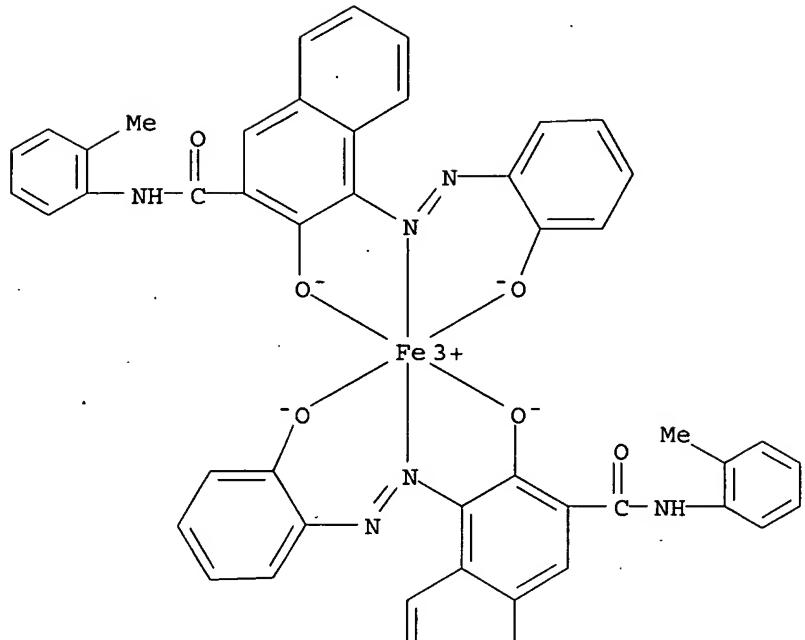
PAGE 2-A

● Na<sup>+</sup>

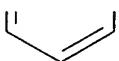
RN 284490-11-5 USPATFULL

CN Ferrate(1-), bis[3-(hydroxy- $\kappa$ O)-4-[[2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-N-(2-methylphenyl)-2-naphthalenecarboxamido(2-)]-, hydrogen  
(9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



● H<sup>+</sup>

L84 ANSWER 72 OF 105

ACCESSION NUMBER:

USPATFULL on STN  
1999:136901 USPATFULL

TITLE:

Toner and image forming method

INVENTOR(S):

Matsunaga, Satoshi, Mishima, Japan  
 Tomiyama, Koichi, Numazu, Japan  
 Mizoh, Yuichi, Shizuoka-ken, Japan  
 Nozawa, Keita, Shizuoka-ken, Japan  
 Endo, Minekazu, Numazu, Japan  
 Doujo, Tadashi, Numazu, Japan  
 Ogawa, Yoshihiro, Numazu, Japan  
 Shibayama, Nene, Mishima, Japan  
 Canon Kabushiki Kaisha, Tokyo, Japan (non-U.S.  
 corporation)

PATENT ASSIGNEE(S):

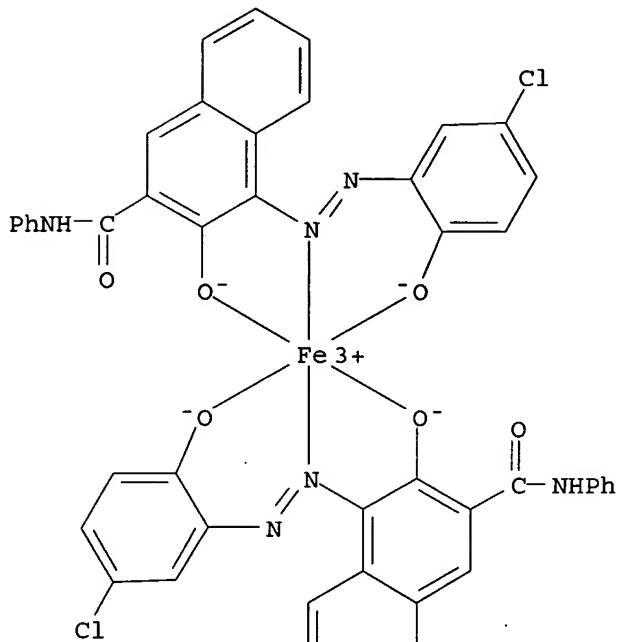
NUMBER	KIND	DATE
US 5976752		19991102
US 1998-135167		19980818 (9)

PATENT INFORMATION:

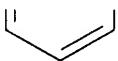
APPLICATION INFO.:

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1997-224142 JP 1997-328185 JP 1998-54929 JP 1998-155095	19970821 19971128 19980306 19980604
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	Granted	
PRIMARY EXAMINER:	Martin, Roland	
LEGAL REPRESENTATIVE:	Fitzpatrick, Cella, Harper and Scinto	
NUMBER OF CLAIMS:	152	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	19 Drawing Figure(s); 17 Drawing Page(s)	
LINE COUNT:	4335	
CAS INDEXING IS AVAILABLE FOR THIS PATENT.		
AB	<p>An electrophotographic toner is composed of at least a binder resin, a colorant, and a wax. The binder resin (a) comprises a polyester resin, a vinyl resin and a hybrid resin component comprising a polyester unit and a vinyl <b>polymer</b> unit, (b) has a THF (tetrahydrofuran)-soluble content (W1) of 50-85 weight % and a THF-insoluble content (W2) of 5-50 weight %, an ethyl acetate-soluble content (W3) of 40-98 weight % and an ethyl acetate-insoluble content (W4) of 2-60 weight %, a chloroform-soluble content (W5) of 55-90 weight % and a chloroform-insoluble content (W6) of 10-45 weight %, respectively after 10 hours of Soxhlet extraction with respective solvents, giving a ratio W4/S6 of 1.1-4.0, and contains a THF-soluble content providing a GPC (gel permeation chromatography) chromatogram exhibiting a main peak in a molecular weight range of 4000-9000, including 35.0-65.0% (A1) of a component having molecular weights in a range of 500 to below 1+10.<sup>sup.4</sup>, 25.0-45.0% (A2) of a component having molecular weights in a range of 1+10.<sup>sup.4</sup> to below 1+10.<sup>sup.5</sup> and 10.0-30.0% (A3) of a component having molecular weights of at least 1+10.<sup>sup.5</sup> giving a ratio A1/A2 of 1.05-2.00. The binder resin shows good dispersibility of wax and colorant.</p>	
IT	167548-21-2 (electrophotog. toners comprising binders comprising polyesters, vinyl resins, and polyester-vinyl hybrid resins and)	
RN	167548-21-2 USPATFULL	
CN	Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-3-(hydroxy- $\kappa$ O)-N-phenyl-2-naphthalenecarboxamido(2-)]- (9CI) (CA INDEX NAME)	

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L84 ANSWER 73 OF 105 - USPATFULL on STN

ACCESSION NUMBER: 1999:132443 USPATFULL

TITLE: Toner for developing electrostatic image,  
process-cartridge and image forming methodINVENTOR(S): Katada, Masaichiro, Sohka, Japan  
Kasuya, Takashige, Sohka, JapanPATENT ASSIGNEE(S): Kobori, Takakuni, Kawasaki, Japan  
Canon Kabushiki Kaisha, Tokyo, Japan (non-U.S.  
corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5972553		19991026
APPLICATION INFO.:	US 1996-736937		19961025 (8)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1995-303311	19951030
	JP 1995-303386	19951030
	JP 1996-214091	19960726

DOCUMENT TYPE: Utility  
FILE SEGMENT: Granted  
PRIMARY EXAMINER: Rodee, Christopher D.

LEGAL REPRESENTATIVE: Fitzpatrick, Cella, Harper & Scinto  
 NUMBER OF CLAIMS: 41  
 EXEMPLARY CLAIM: 1  
 NUMBER OF DRAWINGS: 8 Drawing Figure(s); 6 Drawing Page(s)  
 LINE COUNT: 2619  
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

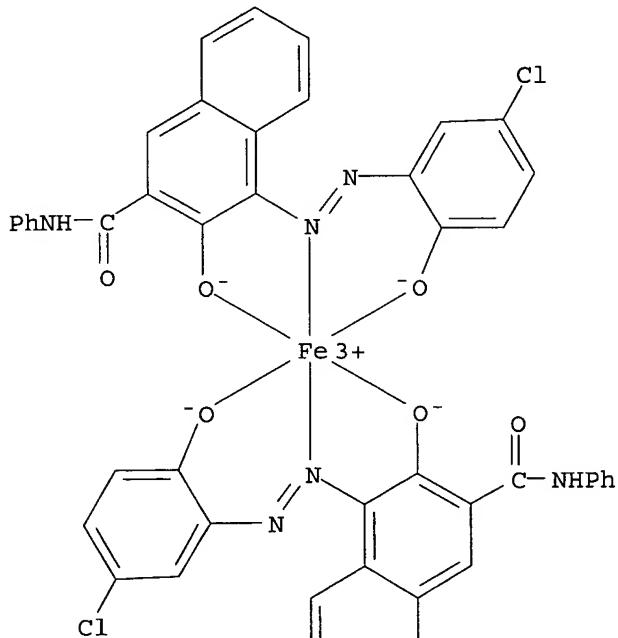
AB A toner for developing an electrostatic image is composed from a composition including: **polymer** components, a colorant, a wax and a charge-controlling agent. The **polymer** components are characterized by (a) containing substantially no THF (tetrahydrofuran)-insoluble content; (b) containing a THF-soluble content giving a GPC (gel permeation chromatography) chromatogram showing a main peak in a molecular weight region of  $3+10.^{sup.3}$  - $3+10.^{sup.4}$ , and a sub-peak or shoulder in a molecular weight region of  $1+10.^{sup.5}$  - $3+10.^{sup.6}$ , and (c) including a low-molecular weight **polymer** component having molecular weights of below  $5+10.^{sup.4}$  on the GPC chromatogram and an acid value  $A_{sub.VL}$ , and a high-molecular weight **polymer** component having molecular weights of at least  $5+10.^{sup.4}$  and an acid value  $A_{sub.VH}$  satisfying  $A_{sub.VL} > A_{sub.VH}$ . The wax has an acid value  $A_{sub.VWax}$  satisfying  $A_{sub.VL} > A_{sub.VWax}$  and  $A_{sub.VWax} > 0$  (mgKOH/g). The toner is characterized by a good combination of low-temperature fixability and anti-offset characteristic, a stable chargeability, and freeness from sleeve ghost phenomenon.

IT 104815-18-1  
 (electrophotog. toners for process cartridges containing)

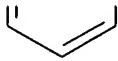
RN 104815-18-1 USPATFULL

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-3-(hydroxy- $\kappa$ O)-N-phenyl-2-naphthalenecarboxamido(2-)]-, ammonium (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

● NH<sub>4</sub><sup>+</sup>

L84 ANSWER 74 OF 105 - USPATFULL on STN

ACCESSION NUMBER: 1999:110466 USPATFULL  
 TITLE: Azo compound and polarizing film  
 INVENTOR(S): Misawa, Tsutami, Kanagawa-ken, Japan  
 Ogiso, Akira, Fukuoka-ken, Japan  
 Imai, Rihoko, Tokyo, Japan  
 Itoh, Hisato, Kanagawa-ken, Japan  
 PATENT ASSIGNEE(S): Mitsui Chemicals, Inc., Tokyo, Japan (non-U.S.  
 corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5952477		19990914
APPLICATION INFO.:	US 1997-951159		19971015 (8)
RELATED APPLN. INFO.:	Division of Ser. No. US 1996-665554, filed on 18 Jun 1996, now abandoned which is a division of Ser. No. US 1994-223740, filed on 6 Apr 1994, now patented, Pat. No. US 5618868		

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1993-94057	19930421
	JP 1993-94058	19930421
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	Granted	
PRIMARY EXAMINER:	Krass, Frederick	
LEGAL REPRESENTATIVE:	Burns, Doane, Swecker & Mathis, L.L.P.	
NUMBER OF CLAIMS:	9	
EXEMPLARY CLAIM:	1	
LINE COUNT:	904	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention is concerned with a novel azo compound represented by formula (1), (2) or (3), a water-soluble dye comprising this azo compound, and a polarizing film containing this azo compound. The obtained polarizing film has high hydrothermoresistance and a high polarization degree and is excellent in optical characteristics:  
 ##STR1## wherein each of the groups is defined.

IT 166195-78-4P 166195-79-5P 166195-82-0P

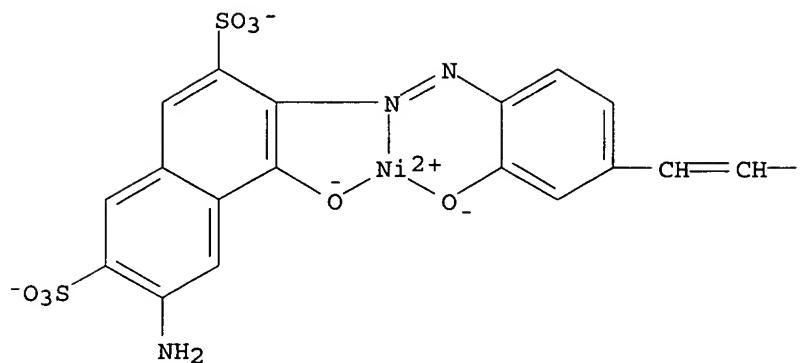
166281-22-7P

(bis(naphthylazo)stilbene dyes and polarizing films containing them)

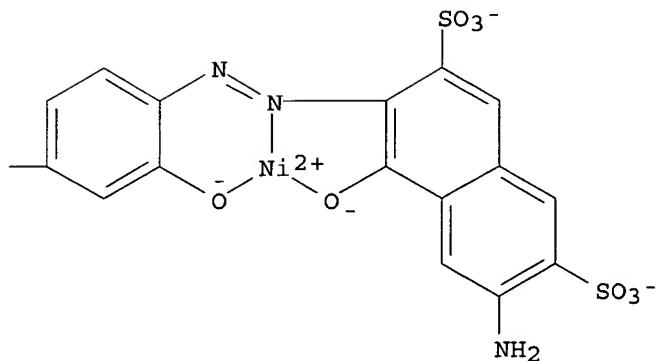
RN 166195-78-4 USPATFULL

CN Nickelate(4-), [μ-[[3,3'-[1,2-ethenediylbis[(2-hydroxy-4,1-phenylene)azo]]bis[6-amino-4-hydroxy-2,7-naphthalenedisulfonato]](8-)]di-, tetrahydrogen (9CI) (CA INDEX NAME)

PAGE 1-A

● 4 H<sup>+</sup>

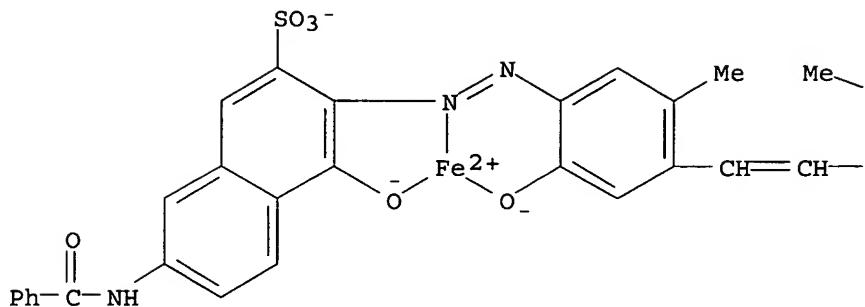
PAGE 1-B



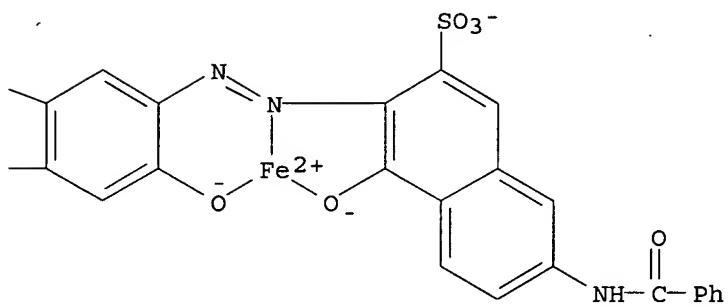
RN 166195-79-5 USPATFULL

CN Ferrate(2-) , [μ-[[3,3'-[1,2-ethenediylbis[(2-hydroxy-5-methyl-4,1-phenylene)azo]]bis[7-(benzoylamino)-4-hydroxy-2-naphthalenesulfonato]](6-)]]]di-, dihydrogen (9CI) (CA INDEX NAME)

PAGE 1-A

●2 H<sup>+</sup>

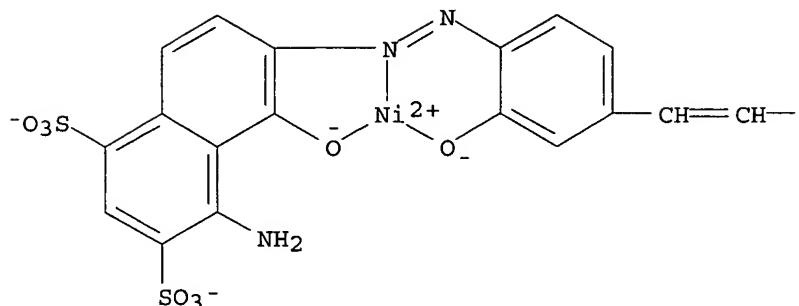
PAGE 1-B



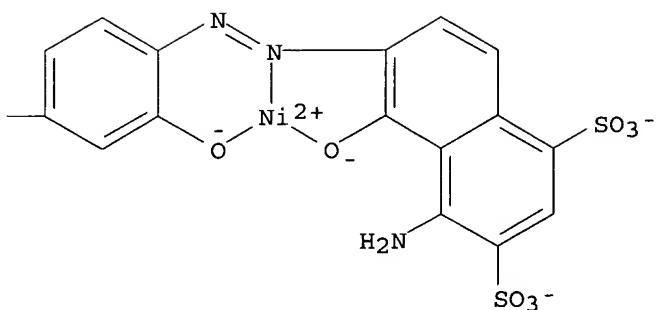
RN 166195-82-0 USPATFULL

CN Nickelate(4-), [ $\mu$ -[[6,6'-[1,2-ethenediylbis[(2-hydroxy-4,1-phenylene)azo]]bis[4-amino-5-hydroxy-1,3-naphthalenedisulfonato]](8-)]di-, tetrahydrogen (9CI) (CA INDEX NAME)

PAGE 1-A

● 4 H<sup>+</sup>

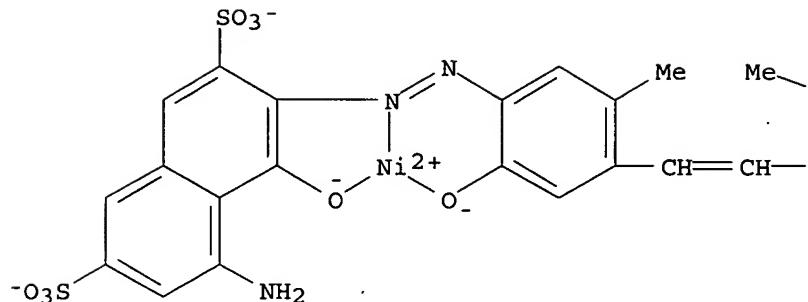
PAGE 1-B



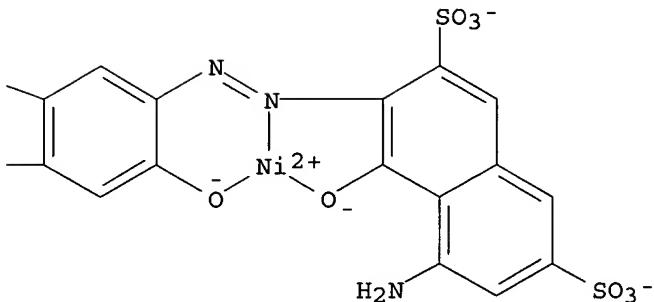
RN 166281-22-7 USPATFULL

CN Nickelate(4-), [ $\mu$ -[[3,3'-[1,2-ethenediylbis[(2-hydroxy-5-methyl-4,1-phenylene)azo]]bis[5-amino-4-hydroxy-2,7-naphthalenedisulfonato]](6-)]]]di-, tetrahydrogen (9CI) (CA INDEX NAME)

PAGE 1-A

● 4 H<sup>+</sup>

PAGE 1-B



L84 ANSWER 75 OF 105 USPATFULL on STN

ACCESSION NUMBER: 1998736500 USPATFULL

TITLE: Toner for developing electrostatic images, process cartridge, and image forming method

INVENTOR(S): Kasuya, Takashige, Soka, Japan  
Suematsu, Hiroyuki, Yokohama, Japan  
Tomiyama, Koichi, Yokohama, Japan  
Yusa, Hiroshi, Machida, Japan  
Kobori, Takakuni, Kawasaki, Japan  
Katada, Masaichiro, Yokohama, Japan

PATENT ASSIGNEE(S): Canon Kabushiki Kaisha, Tokyo, Japan (non-U.S. corporation)

NUMBER KIND DATE

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PATENT INFORMATION: US 5736288 19980407

APPLICATION INFO.: US 1995-440935 19950515 (8)

NUMBER DATE

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PRIORITY INFORMATION: JP 1994-123302 19940513

JP 1994-196211	19940729
JP 1995-7424	19950120
JP 1995-11697	19950127

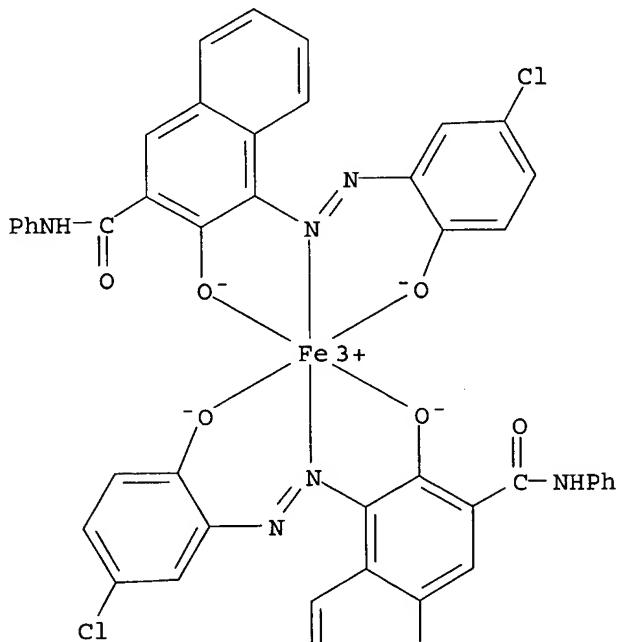
DOCUMENT TYPE: Utility  
FILE SEGMENT: Granted  
PRIMARY EXAMINER: Rodee, Christopher D.  
LEGAL REPRESENTATIVE: Fitzpatrick, Cella, Harper & Scinto  
NUMBER OF CLAIMS: 50  
EXEMPLARY CLAIM: 1  
NUMBER OF DRAWINGS: 6 Drawing Figure(s); 3 Drawing Page(s)  
LINE COUNT: 3098

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

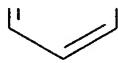
AB A toner is comprised of a composition containing at least a polymer component and a charge control agent. The polymer component contains substantially no tetrahydrofuran (THF)-insoluble matter. The polymer component THF-soluble has a major peak and a minor peak in the specific molecular weight regions in gel permeation chromatography (GPC). The low molecular weight component and high molecular weight component of the polymer component, each of which shows the specific molecular weight region in GPC, have the specific acid values, respectively. The difference between the acid values is in the specific range.

IT 104815-18-1 (charge control agent for electrostatog. toner and image formation)  
RN 104815-18-1 USPATFULL  
CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-3-(hydroxy- $\kappa$ O)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

● NH<sub>4</sub><sup>+</sup>

L84 ANSWER 76 OF 105 USPATFULL on STN  
 ACCESSION NUMBER: 1998:9306 USPATFULL  
 TITLE: Toner for developing electrostatic latent image  
 INVENTOR(S): Sato, Yukiya, Wakayama, Japan  
 Maruta, Masayuki, Wakayama, Japan  
 Ito, Yasushi, Wakayama, Japan  
 Nakamura, Genichi, Wakayama, Japan  
 PATENT ASSIGNEE(S): Kao Corporation, Tokyo, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5712074		19980127
APPLICATION INFO.:	US 1997-779664		19970107 (8)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1996-19423	19960109
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	Granted	
PRIMARY EXAMINER:	Rodee, Christopher D.	
LEGAL REPRESENTATIVE:	Birch, Stewart, Kolasch & Birch, LLP	
NUMBER OF CLAIMS:	9	
EXEMPLARY CLAIM:	1	
LINE COUNT:	1348	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

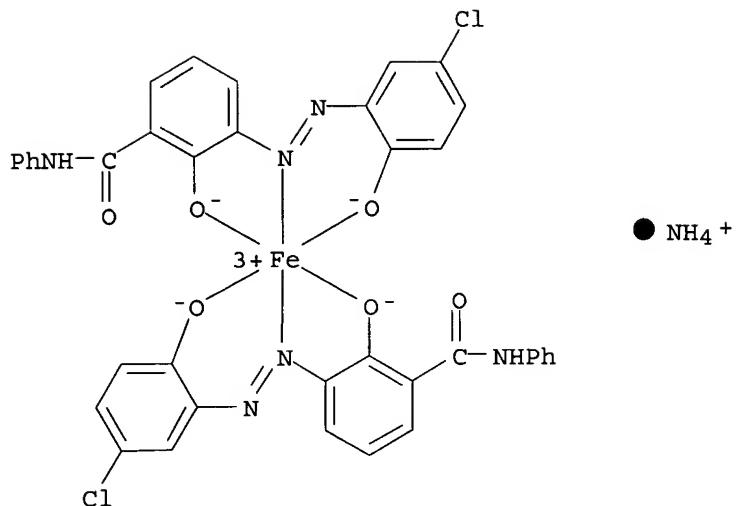
AB A toner for developing an electrostatic latent image including a binder resin, a colorant, and a modified polysiloxane having the general formula (1): ##STR1## In the above general formula, R.<sup>1</sup> to R.<sup>4</sup>, which may be identical or different, each stands for an alkyl group having 1 to 6 carbon atoms, a phenyl group, or a naphthyl group; R.<sup>5</sup> and R.<sup>6</sup>, which may be identical or different, each stands for a linear or branched, saturated hydrocarbon group having an average number of carbon atoms of from 16 to 600; and n and m each stands for a number of zero (0) or more.

IT 156108-08-6, T 77

(electrostatog. toners with good blocking resistance and free flowability containing polysiloxanes and)

RN 156108-08-6 USPATFULL

CN Ferrate(1-), bis[3-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-2-(hydroxy- $\kappa$ O)-N-phenylbenzamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)



L84 ANSWER 77 OF 105 USPATFULL on STN  
 ACCESSION NUMBER: 97:49483 USPATFULL  
 TITLE: Nonmagnetic one-component toner  
 INVENTOR(S): Shimizu, Jun, Wakayama, Japan  
 Sata, Shin-ichi, Wakayama, Japan  
 Hidaka, Yasuhiro, Wakayama, Japan  
 Maruta, Masayuki, Wakayama, Japan  
 PATENT ASSIGNEE(S): Kao Corporation, Tokyo, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5637430		19970610
APPLICATION INFO.:	US 1996-654909		19960529 (8)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1995-155399	19950529
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	Granted	
PRIMARY EXAMINER:	Martin, Roland	
NUMBER OF CLAIMS:	6	
EXEMPLARY CLAIM:	1	
LINE COUNT:	715	

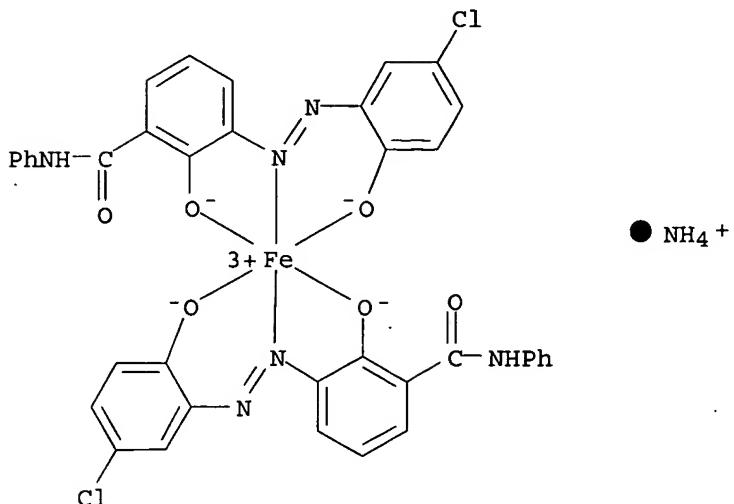
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The nonmagnetic one-component toner is usable in a developer device including a developer roller and a blade, the blade serving to regulate a toner layer formed on the developer roller into a uniform thickness and to supply electric charges to the toner by triboelectric charging, and the nonmagnetic one-component toner includes at least a binder resin, a colorant, and an iron compound. Here, the binder resin includes a polyester resin as a main component, and the iron compound has the general formula (I) and is contained in an amount of between 0.1 parts by weight or more and less than 1.0 part by weight, based on 100 parts by weight of the binder resin.

IT 156108-08-6, Aizen Spilon Black T 77  
 (charge controlling agent; nonmagnetic one-component electrophotog.  
 toner containing polyester and iron complex)

RN 156108-08-6 USPATFULL

CN Ferrate(1-), bis[3-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-2-(hydroxy- $\kappa$ O)-N-phenylbenzamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)



L84 / ANSWER 78 OF 105 USPATFULL on STN  
 ACCESSION NUMBER: 97:29523 USPATFULL  
 TITLE: Polarizing film of a hydrophilic polymer film containing a novel azo compound  
 INVENTOR(S): Misawa, Tsutami, Kanagawa-ken, Japan  
 Ogiso, Akira, Fukuoka-ken, Japan  
 Imai, Rihoko, Tokyo, Japan  
 Itoh, Hisato, Kanagawa-ken, Japan  
 PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Inc., Tokyo, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5618868		19970408
APPLICATION INFO.:	US 1994-223740		19940406 (8)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1993-94057	19930421
	JP 1993-94058	19930421

DOCUMENT TYPE: Utility  
 FILE SEGMENT: Granted  
 PRIMARY EXAMINER: Henderson, Christopher  
 LEGAL REPRESENTATIVE: Burns, Doane, Swecker & Mathis  
 NUMBER OF CLAIMS: 6  
 EXEMPLARY CLAIM: 1  
 LINE COUNT: 828

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention is concerned with a novel azo compound represented by formula (1), (2) or (3), a water-soluble dye comprising this azo compound, and a polarizing film containing this azo compound. The obtained polarizing film has high hydrothermoresistance and a high polarization degree and is excellent in optical characteristics:  
 ##STR1## wherein each of R.sub.1, R.sub.3 and R.sub.12 is independently

a hydrogen atom, halogen atom, hydroxyl group, alkyl group having 1 or 2 carbon atoms, or alkoxy group having 1 or 2 carbon atoms; each of R.sub.2, R.sub.4, R.sub.8 and R.sub.9 is independently a hydrogen atom, hydroxyl group, alkyl group having 1 or 2 carbon atoms, alkoxy group having 1 or 2 carbon atoms, or acetylamino group; R.sub.5 is a hydroxyl group or amino group at the o-position or p-position to the azo group; each of R.sub.6 and R.sub.10 is a hydrogen atom, carboxyl group, or alkoxy group having 1 or 2 carbon atoms; each of R.sub.7 and R.sub.11 is a hydrogen atom, hydroxyl group, amino group, methylamino group,  $\beta$ -hydroxyethylamino group, acetylamino group, or phenylamino or benzoylamino group in which the phenyl nucleus may be substituted by a nitro group, amino group, hydroxyl group, alkyl group having 1 or 2 carbon atoms, carboxyl group, sulfonic group or chlorine atom; p is 0 or 1; and q is 0, 1 or 2.

IT 166195-78-4P 166195-79-5P 166195-82-0P

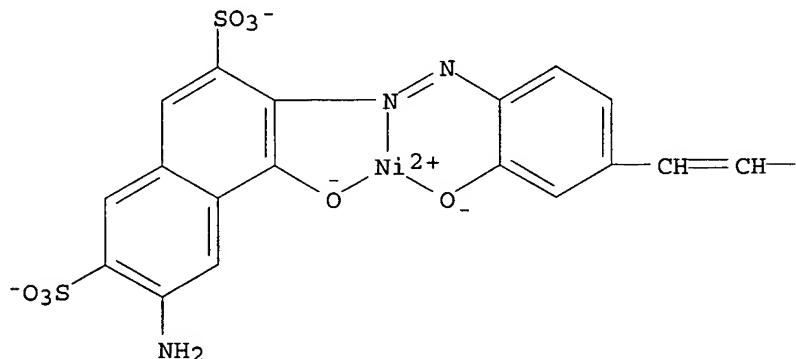
166281-22-7P

(bis(naphthylazo)stilbene dyes and polarizing films containing them)

RN 166195-78-4 USPATFULL

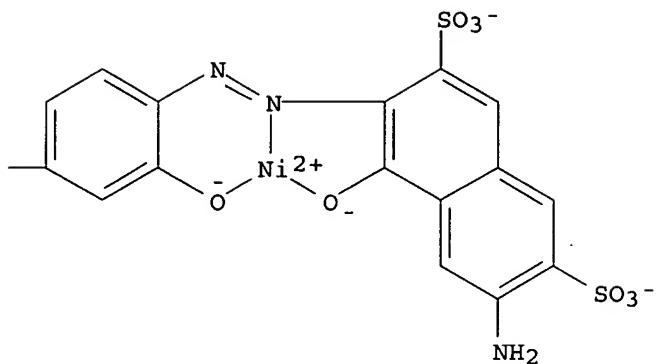
CN Nickelate(4-), [ $\mu$ -[[3,3'-[1,2-ethenediylbis[(2-hydroxy-4,1-phenylene)azo]]bis[6-amino-4-hydroxy-2,7-naphthalenedisulfonato]](8-)]di-, tetrahydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



●4 H<sup>+</sup>

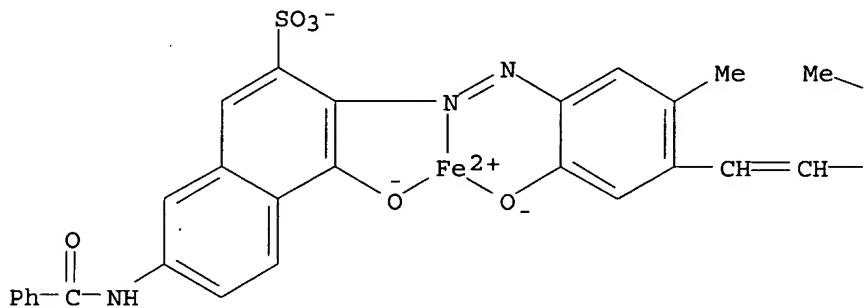
PAGE 1-B



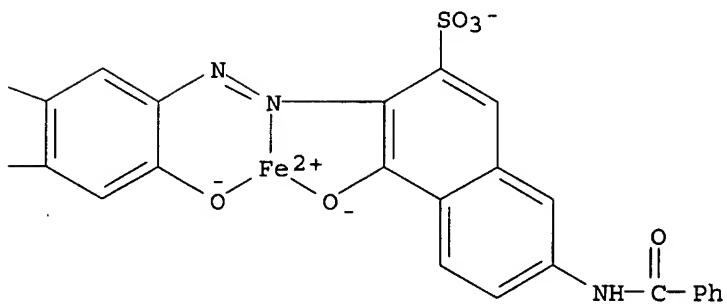
RN 166195-79-5 USPATFULL

CN Ferrate(2-), [ $\mu$ -[[3,3'-[1,2-ethenediylbis[(2-hydroxy-5-methyl-4,1-phenylene)azol]]bis[7-(benzoylamino)-4-hydroxy-2-naphthalenesulfonato]](6-)]di-, dihydrogen (9CI) (CA INDEX NAME)

PAGE 1-A

●2 H<sup>+</sup>

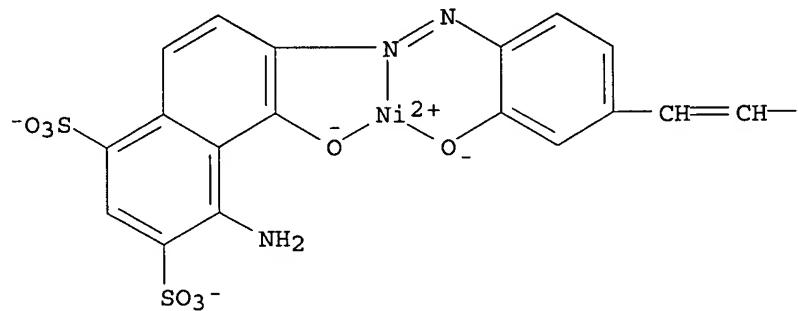
PAGE 1-B



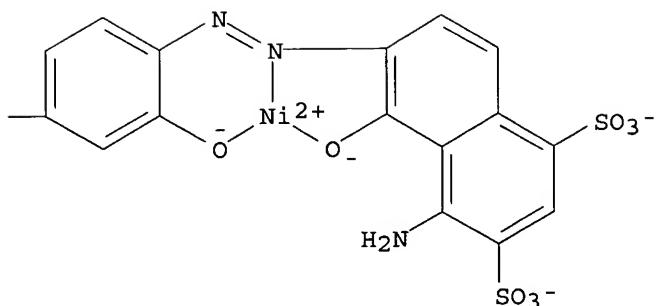
RN 166195-82-0 USPATFULL

CN Nickelate(4-), [ $\mu$ -[[6,6'-[1,2-ethenediylbis[(2-hydroxy-4,1-phenylene)azo]]bis[4-amino-5-hydroxy-1,3-naphthalenedisulfonato]](8-)]]]di-, tetrahydrogen (9CI) (CA INDEX NAME)

PAGE 1-A

● 4 H<sup>+</sup>

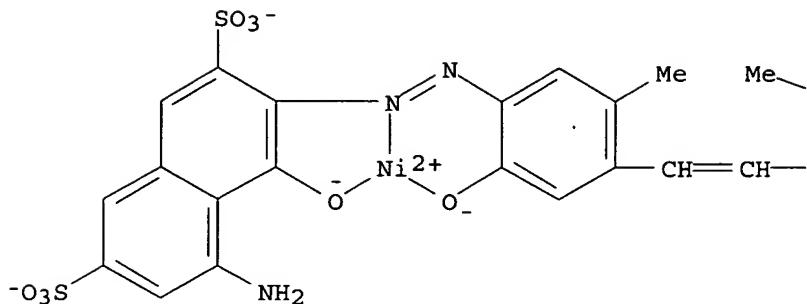
PAGE 1-B



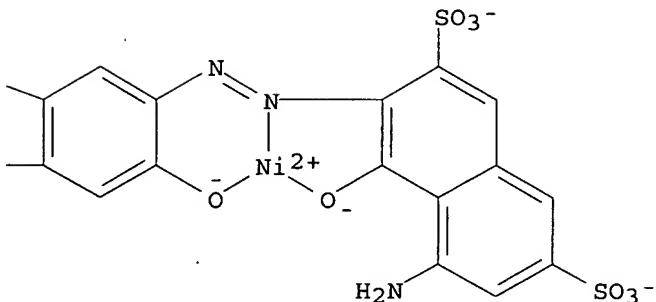
RN 166281-22-7 USPATFULL

CN Nickelate(4-), [ $\mu$ -[[3,3'-[1,2-ethenediylbis[(2-hydroxy-5-methyl-4,1-phenylene)azo]]bis[5-amino-4-hydroxy-2,7-naphthalenedisulfonato]](6-)]]]di-, tetrahydrogen (9CI) (CA INDEX NAME)

PAGE 1-A

● 4 H<sup>+</sup>

PAGE 1-B



L84 ANSWER 79 OF 105 USPATFULL on, STN  
 ACCESSION NUMBER: 95:95021 USPATFULL  
 TITLE: Organic soluble metal-azo and metal-azomethine dyes  
 INVENTOR(S): Smith, Terrance P., Woodbury, MN, United States  
 Macomber, David W., St. Paul, MN, United States  
 PATENT ASSIGNEE(S): Minnesota Mining and Manufacturing Company, Saint Paul,  
 MN, United States (U.S. corporation)

NUMBER	KIND	DATE
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PATENT INFORMATION: US 5461155 19951024  
 APPLICATION INFO.: US 1995-424228 19950419 (8)  
 RELATED APPLN. INFO.: Continuation of Ser. No. US 1994-188467, filed on 27  
 Jan 1994, now abandoned which is a division of Ser. No.  
 US 1992-941741, filed on 8 Sep 1992, now patented, Pat.  
 No. US 5314998  
 DOCUMENT TYPE: Utility  
 FILE SEGMENT: Granted  
 PRIMARY EXAMINER: Berch, Mark L.  
 LEGAL REPRESENTATIVE: Griswold, Gary L., Kirn, Walter N., Everageitt, Gregory  
 A.

NUMBER OF CLAIMS:

7

EXEMPLARY CLAIM:

1

NUMBER OF DRAWINGS:

6 Drawing Figure(s); 4 Drawing Page(s)

LINE COUNT:

1627

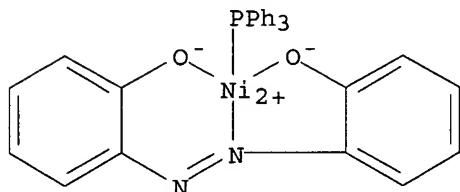
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Metal-Azomethine dyes with excellent solubility in organic media. The dyes have an arene nucleus and are substituted, in part, with a non-free-radically **polymerizable** alkyldiketonate or 8-hydroxyquinolinate ligand. The dyes are useful in dye diffusion transfer processes.

IT 148250-55-9P

(preparation of, as brown dye for thermal-transfer printing)

RN 148250-55-9 USPATFULL

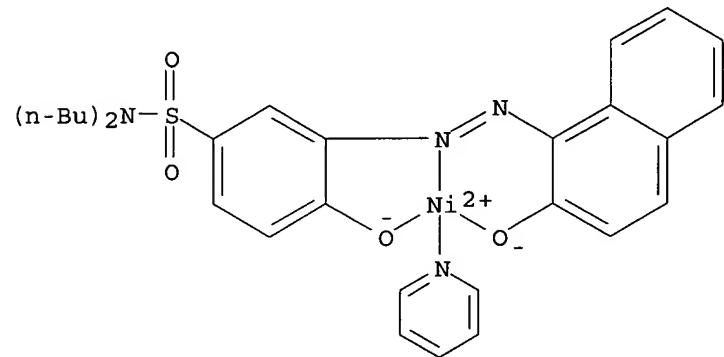
CN Nickel, [[2,2'-azobis[phenolato]](2-)-N,O,O'](triphenylphosphine)- (9CI)  
(CA INDEX NAME)

IT 158476-26-7P 158476-27-8P 158476-28-9P  
158680-57-0P 158680-58-1P 158680-59-2P  
158680-60-5P 158680-61-6P

(preparation of, as dye for thermal-transfer printing)

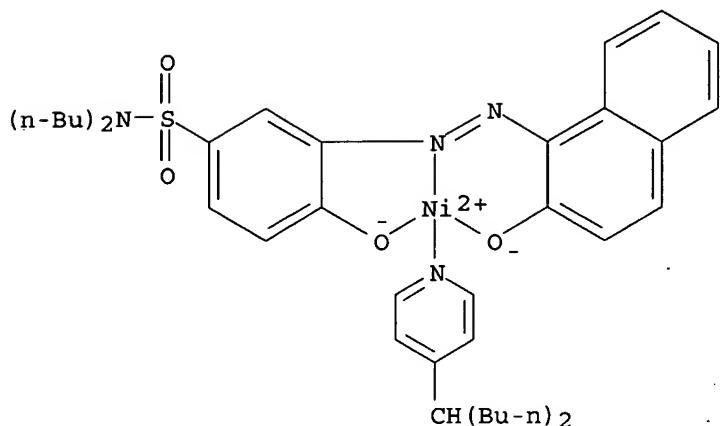
RN 158476-26-7 USPATFULL

CN Nickel, [N,N-dibutyl-4-hydroxy-3-[(2-hydroxy-1-naphthalenyl)azo]benzenesulfonamidato(2-)](pyridine)- (9CI) (CA INDEX NAME)



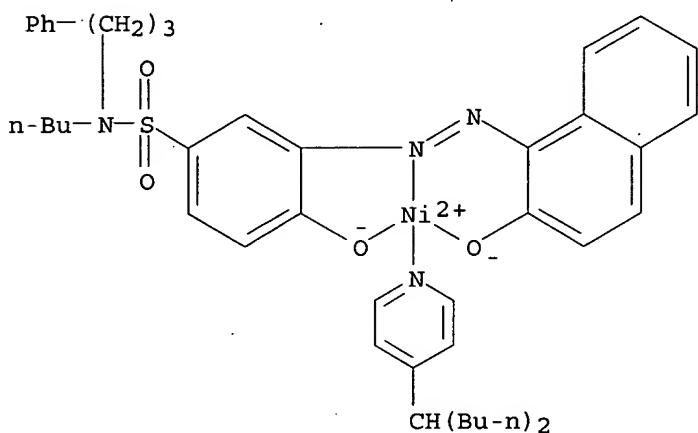
RN 158476-27-8 USPATFULL

CN Nickel, [4-(1-butylpentyl)pyridine] [N,N-dibutyl-4-hydroxy-3-[(2-hydroxy-1-naphthalenyl)azo]benzenesulfonamidato(2-)]- (9CI) (CA INDEX NAME)



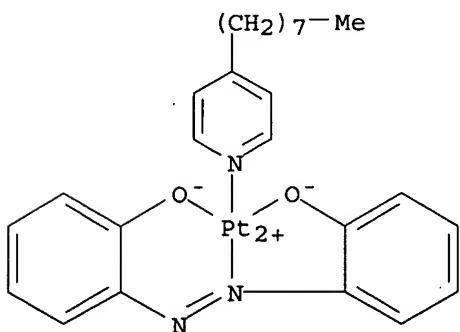
RN 158476-28-9 USPATFULL

CN Nickel, [N-butyl-4-hydroxy-3-[(2-hydroxy-1-naphthalenyl)azo]-N-(3-phenylpropyl)benzenesulfonamido(2-)][4-(1-butylpentyl)pyridine]- (9CI)  
(CA INDEX NAME)

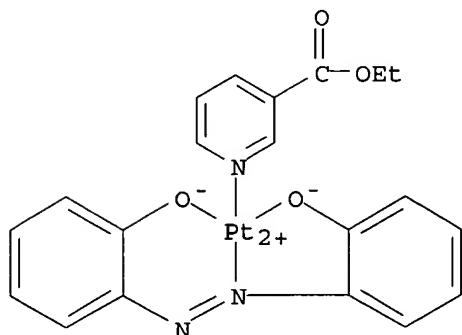


RN 158680-57-0 USPATFULL

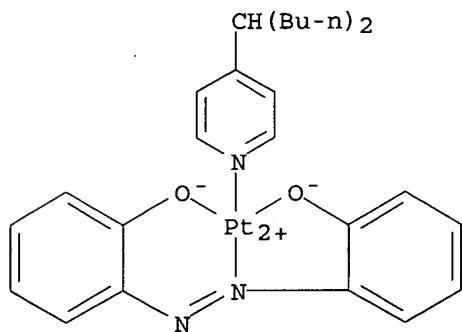
CN Platinum, [[2,2'-(azo- $\kappa$ N)bis[phenolato- $\kappa$ O]](2-)](4-octylpyridine)-, (SP-4-2)- (9CI) (CA INDEX NAME)



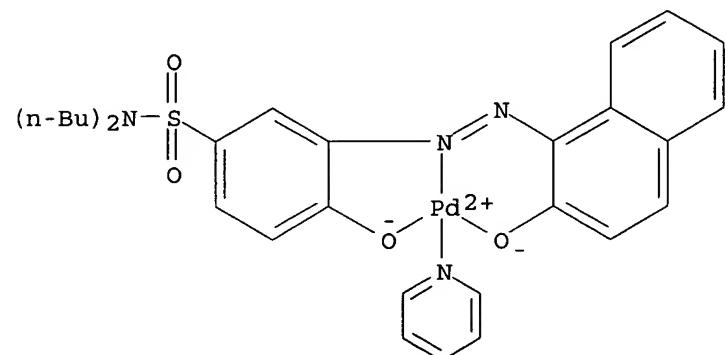
RN 158680-58-1 USPATFULL

CN Platinum, [ [2,2'-(azo- $\kappa$ N)bis[phenolato- $\kappa$ O]](2-) ] (ethyl  
3-pyridinecarboxylate- $\kappa$ N1)-, (SP-4-2)- (9CI) (CA INDEX NAME)

RN 158680-59-2 USPATFULL

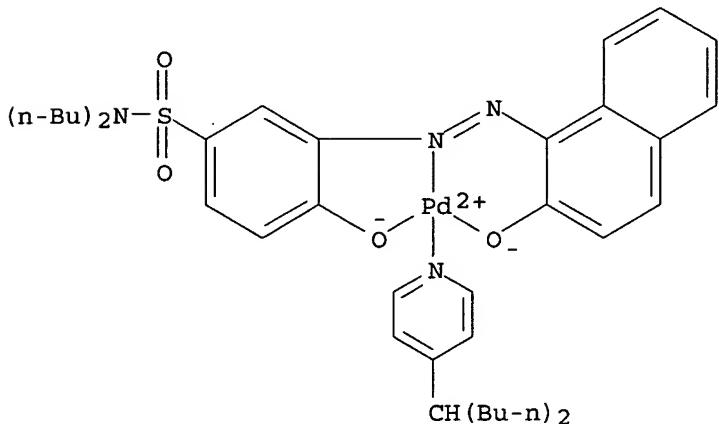
CN Platinum, [ [2,2'-(azo- $\kappa$ N)bis[phenolato- $\kappa$ O]](2-) ] [4-(1-  
butylpentyl)pyridine]-, (SP-4-2)- (9CI) (CA INDEX NAME)

RN 158680-60-5 USPATFULL

CN Palladium, [N,N-dibutyl-4-hydroxy-3-[ (2-hydroxy-1-  
naphthalenyl)azo]benzenesulfonamido(2-) ] (pyridine)-, (SP-4-2)- (9CI)  
(CA INDEX NAME)

RN 158680-61-6 USPATFULL

CN Palladium, [4-(1-butylpentyl)pyridine] [N,N-dibutyl-4-hydroxy-3-[(2-hydroxy-1-naphthalenyl)azo]benzenesulfonamido]-, (SP-4-2)- (9CI) (CA INDEX NAME)



L84 ANSWER 80 OF 105 USPATFULL on STN

ACCESSION NUMBER: 95:71224 USPATFULL

TITLE: Toner for developing electrostatic image, image forming apparatus and process cartridge

INVENTOR(S): Taya, Masaaki, Kawasaki, Japan  
Kohtaki, Takaaki, Yokohama, Japan  
Unno, Makoto, Tokyo, Japan  
Doujo, Tadashi, Ebina, Japan

PATENT ASSIGNEE(S): Canon Kabushiki Kaisha, Tokyo, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5439770		19950808
APPLICATION INFO.:	US 1994-228269		19940415 (8)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1993-93181	19930420
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	Granted	
PRIMARY EXAMINER:	Martin, Roland	
LEGAL REPRESENTATIVE:	Fitzpatrick, Cella, Harper & Scinto	
NUMBER OF CLAIMS:	24	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	3 Drawing Figure(s); 3 Drawing Page(s)	
LINE COUNT:	1862	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A toner for developing an electrostatic image is constituted by at least a binder resin and a charge control agent. The binder resin has an acid value of 5-50. The charge control agent comprises an iron complex represented by the following formula: ##STR1## wherein X<sub>sub.1</sub> and X<sub>sub.2</sub> independently denote hydrogen atom, lower alkyl group, lower alkoxy group, nitro group or halogen atom; m and m' denote an integer of 1-3; R<sub>sub.1</sub> and R<sub>sub.3</sub> independently denote hydrogen atom, C<sub>sub.1-18</sub> alkyl or alkenyl, sulfonamide, mesyl, sulfonic acid group, carboxy ester group, hydroxy, C<sub>sub.1-18</sub> alkoxy, acetyl amino, benzoyl amino or halogen

atom; n and n' denote an integer of 1-3; R.<sub>sub.2</sub> and R.<sub>sub.4</sub> denote hydrogen atom or nitro group; and A.<sup>sup.+</sup> denotes hydrogen ion, sodium ion, potassium ion or ammonium ion. The toner has a weight-average particle size (D.<sub>sub.4</sub>) of 4-9  $\mu\text{m}$  and including toner particles having a particle size of 5  $\mu\text{m}$  or smaller at 3-90% by number, toner particles having a particle size of 6.35-10.08  $\mu\text{m}$  at 1-80% by number and toner particles having a particle size of 12.7  $\mu\text{m}$  or larger at a percentage by volume of at most 2.0%, wherein the toner particles having a particle size of 5.0  $\mu\text{m}$  or smaller are contained at N % by number and at V % by volume satisfying a relationship:

$$N/V = -0.05N + k,$$

wherein k is a positive number in the range of 3.0-7.5.

IT 104815-18-1 163756-19-2 163756-22-7

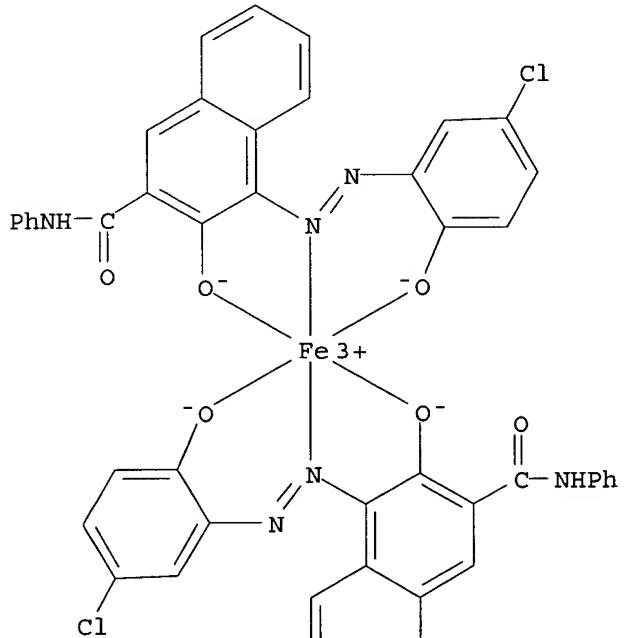
163799-98-2

(charge control agent for electrophotog. toner)

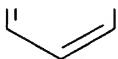
RN 104815-18-1 USPATFULL

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-3-(hydroxy- $\kappa$ O)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)

PAGE 1-A



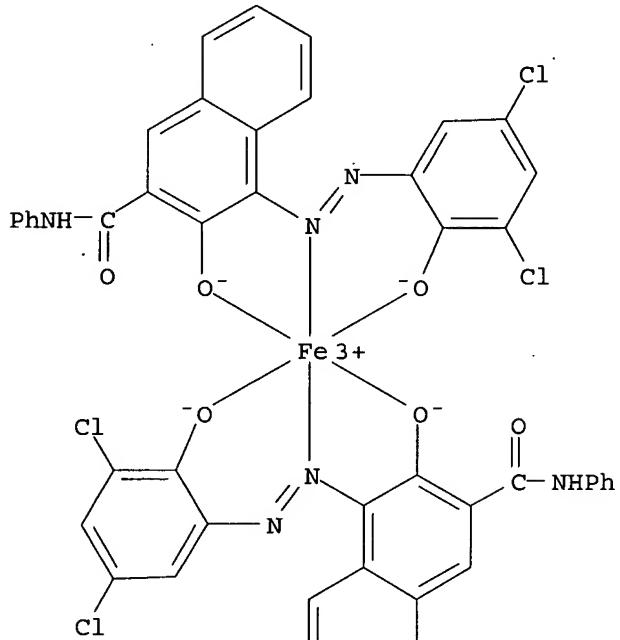
PAGE 2-A

● NH<sub>4</sub><sup>+</sup>

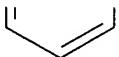
RN 163756-19-2 USPATFULL

CN Ferrate(1-) , bis[4-[[3,5-dichloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-3-(hydroxy- $\kappa$ O)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, hydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

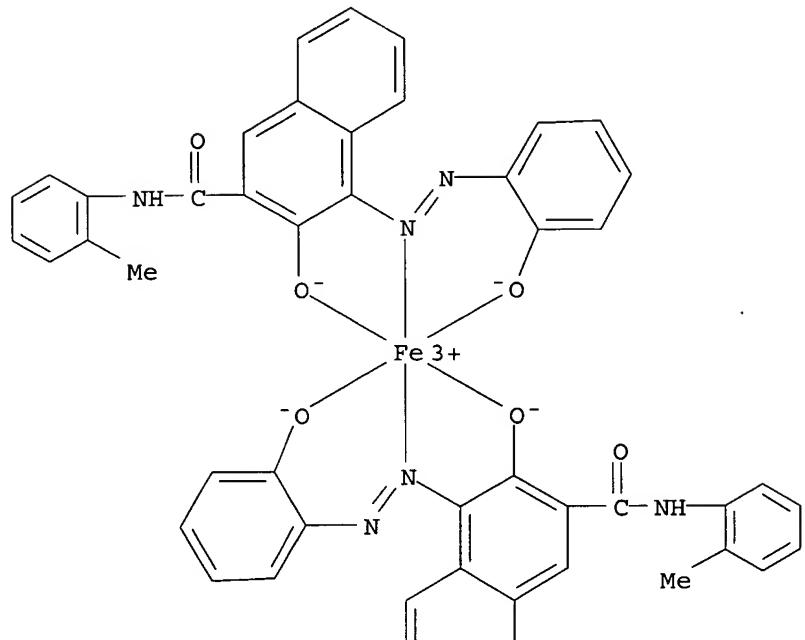
● H<sup>+</sup>

RN 163756-22-7 USPATFULL

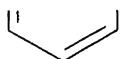
CN Ferrate(1-) , bis[3-(hydroxy- $\kappa$ O)-4-[[2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-N-(2-methylphenyl)-2-naphthalenecarboxamidato(2-)]-, ammonium

(9CI) (CA INDEX NAME)

PAGE 1-A



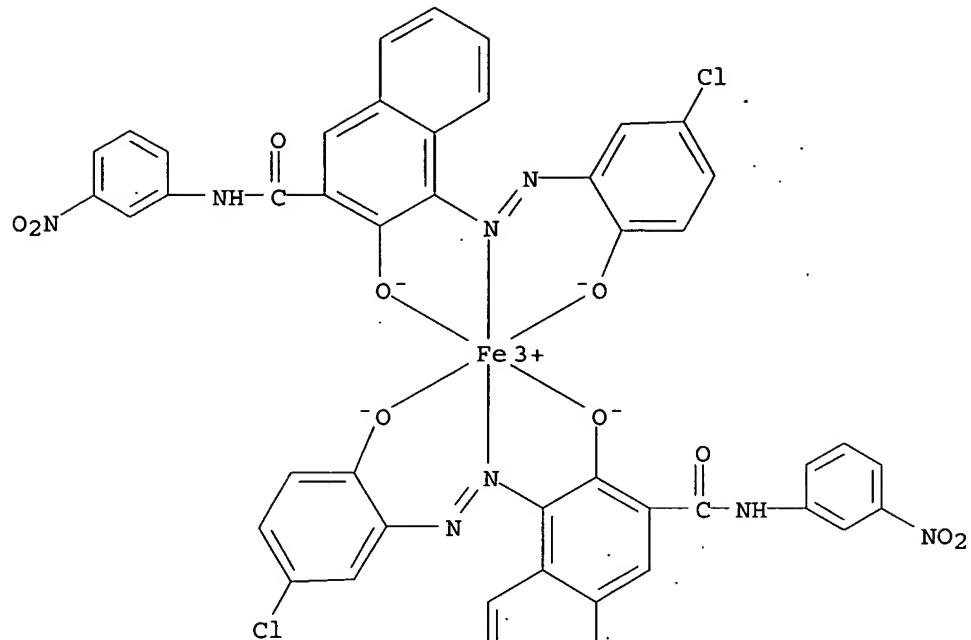
PAGE 2-A

● NH<sub>4</sub><sup>+</sup>

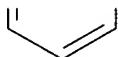
RN 163799-98-2 USPATFULL

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-(3-nitrophenyl)-2-naphthalenecarboxamido(2-)]-, sodium (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

●  $\text{Na}^+$ 

L84 ANSWER 81 OF 105

USPATFULL on STN®

ACCESSION NUMBER:

94:70922 USPATFULL

TITLE:

Toner for developing electrostatic image and process  
for production thereof

INVENTOR(S) :

Tsuchiya, Kiyoko, Yokosuka, Japan  
Tomiyama, Koichi, Kawasaki, Japan  
Kato, Masayoshi, Iruma, Japan  
Kukimoto, Tsutomu, Yokohama, Japan  
Yusa, Hiroshi, Yokohama, Japan

PATENT ASSIGNEE(S) :

Canon Kabushiki Kaisha, Tokyo, Japan (non-U.S.  
corporation)

NUMBER            KIND            DATE

PATENT INFORMATION:  
APPLICATION INFO.:US 5338638            19940816  
US 1991-797992            19911126 (7)

NUMBER            DATE

PRIORITY INFORMATION: JP 1990-332693 19901129  
 DOCUMENT TYPE: Utility  
 FILE SEGMENT: Granted  
 PRIMARY EXAMINER: Goodrow, John  
 LEGAL REPRESENTATIVE: Fitzpatrick, Cella, Harper & Scinto  
 NUMBER OF CLAIMS: 49  
 EXEMPLARY CLAIM: 1  
 NUMBER OF DRAWINGS: 3 Drawing Figure(s); 2 Drawing Page(s)  
 LINE COUNT: 1743

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A toner for developing an electrostatic image is provided as a pulverized mixture including a binder resin and a colorant. The binder resin is characterized by a molecular weight distribution on a GPC chromatogram of its tetrahydrofuran (THF)-soluble resin content including at least 15% and below 35% of a resin component in a molecular weight region of at most 5000 and at least 3 weight % of a resin component in a molecular weight region of at least 5+10.sup.6 and showing a main peak in a molecular weight region of 5000 to 10.sup.5. The binder resin also has an acid value of 2-100 mg KOH/g. The THF-soluble resin component in the molecular weight region of at least 5+10.sup.6 is enriched during a melt-kneading step during the toner production.

IT 143977-17-7

(electrostatog. toners containing)

RN 143977-17-7 USPATFULL

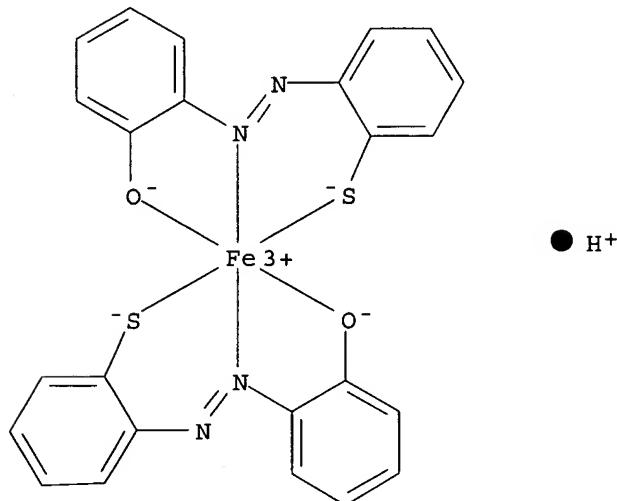
CN Ferrate(1-), bis[2-[2-(mercapto- $\kappa$ S)phenyl]azo- $\kappa$ N1]phenolato(2- $\kappa$ O]-, hydrogen, compd.with N-butyl-1-butanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 143977-16-6

CMF C24 H16 Fe N4 O2 S2 . H

CCI CCS



CM 2

CRN 111-92-2

CMF C8 H19 N

n-Bu-NH-Bu-n

L84 ANSWER 82 OF 105 USPATFULL on STN  
 ACCESSION NUMBER: 94:44739 USPATFULL  
 TITLE: Organic solvent-soluble metal-azo and metal-azomethine dyes  
 INVENTOR(S): Smith, Terrance P., Woodbury, MN, United States  
 Macomber, David W., St. Paul, MN, United States  
 PATENT ASSIGNEE(S): Minnesota Mining and Manufacturing Company, St. Paul, MN, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5314998		19940524
APPLICATION INFO.:	US 1992-941741		19920908 (7)
DOCUMENT TYPE:		Utility	
FILE SEGMENT:		Granted	
PRIMARY EXAMINER:		Lee, Mary C.	
ASSISTANT EXAMINER:		Powers, Fiona T.	
LEGAL REPRESENTATIVE:		Griswold, Gary L., Kirn, Walter N., Evaritt, Gregory A.	
NUMBER OF CLAIMS:	11		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	6 Drawing Figure(s); 4 Drawing Page(s)		
LINE COUNT:	1571		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

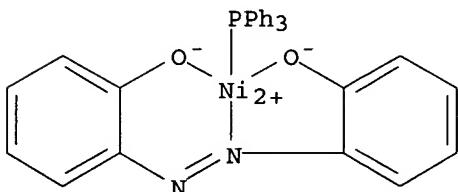
AB Metal-azo dyes with excellent solubility in organic media are provided. The metal-containing dyes of the present invention have a nucleus of the formula: ##STR1## wherein the substituents have the meaning given in the description. Dye-donor sheets comprising the above-mentioned dyes are also disclosed.

IT 148250-55-9P

(preparation of, as brown dye for thermal-transfer printing)

RN 148250-55-9 USPATFULL

CN Nickel, [[2,2'-azobis[phenolato]](2-)-N,O,O'](triphenylphosphine)- (9CI) (CA INDEX NAME)



IT 158476-26-7P 158476-27-8P 158476-28-9P

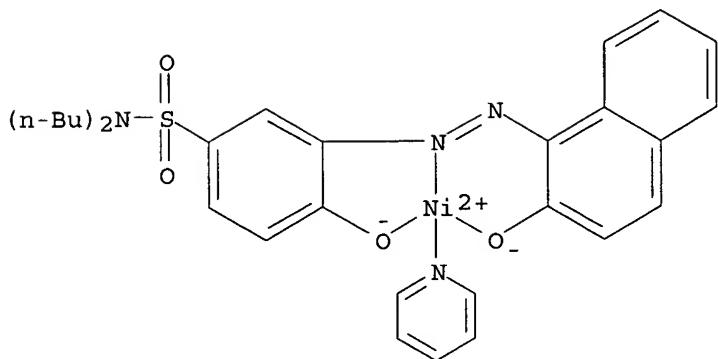
158680-57-0P 158680-58-1P 158680-59-2P

158680-60-5P 158680-61-6P

(preparation of, as dye for thermal-transfer printing)

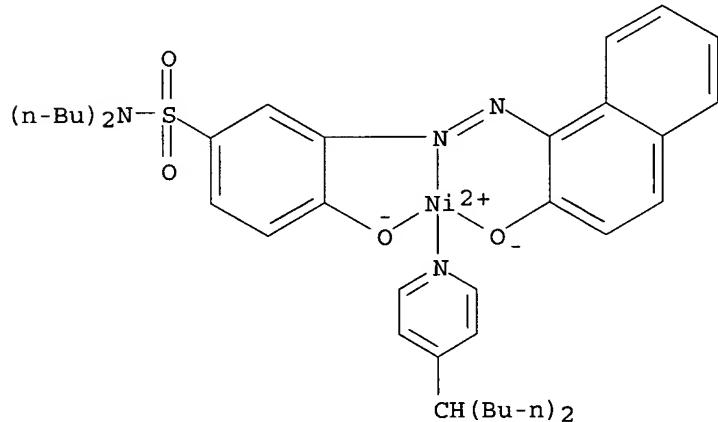
RN 158476-26-7 USPATFULL

CN Nickel, [N,N-dibutyl-4-hydroxy-3-[(2-hydroxy-1-naphthalenyl)azo]benzenesulfonamido(2-)](pyridine)- (9CI) (CA INDEX NAME)



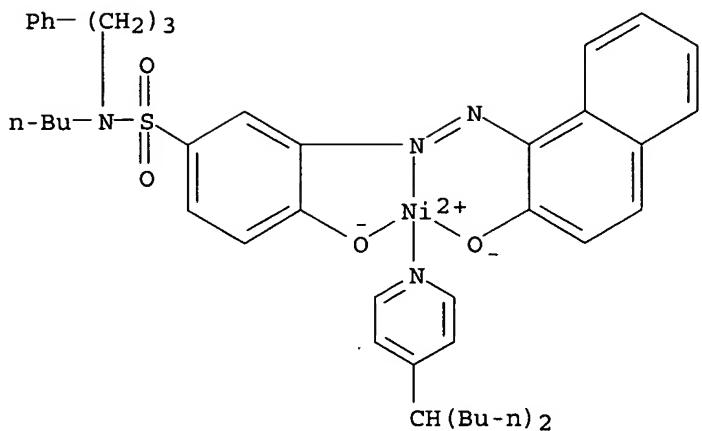
RN 158476-27-8 USPATFULL

CN Nickel, [4-(1-butylpentyl)pyridine] [N,N-dibutyl-4-hydroxy-3-[(2-hydroxy-1-naphthalenyl)azo]benzenesulfonamidato(2-)]- (9CI) (CA INDEX NAME)

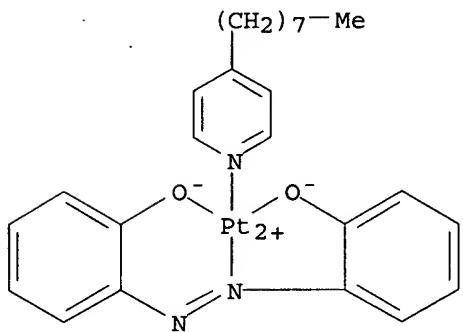


RN 158476-28-9 USPATFULL

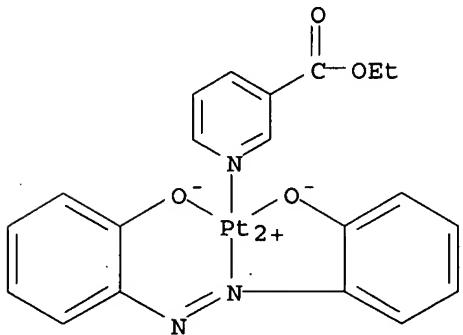
CN Nickel, [N-butyl-4-hydroxy-3-[(2-hydroxy-1-naphthalenyl)azo]-N-(3-phenylpropyl)benzenesulfonamidato(2-)] [4-(1-butylpentyl)pyridine]- (9CI) (CA INDEX NAME)



RN 158680-57-0 USPATFULL

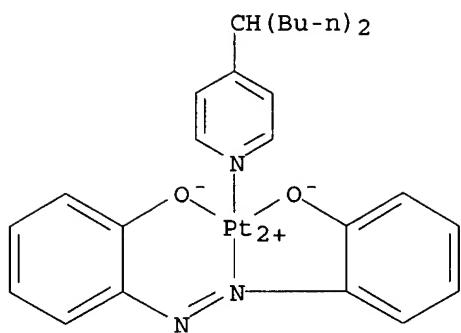
CN Platinum, [[2,2'-(azo- $\kappa$ N)bis[phenolato- $\kappa$ O]](2-)](4-octylpyridine)-, (SP-4-2)- (9CI) (CA INDEX NAME)

RN 158680-58-1 USPATFULL

CN Platinum, [[2,2'-(azo- $\kappa$ N)bis[phenolato- $\kappa$ O]](2-)](ethyl 3-pyridinecarboxylate- $\kappa$ N1)-, (SP-4-2)- (9CI) (CA INDEX NAME)

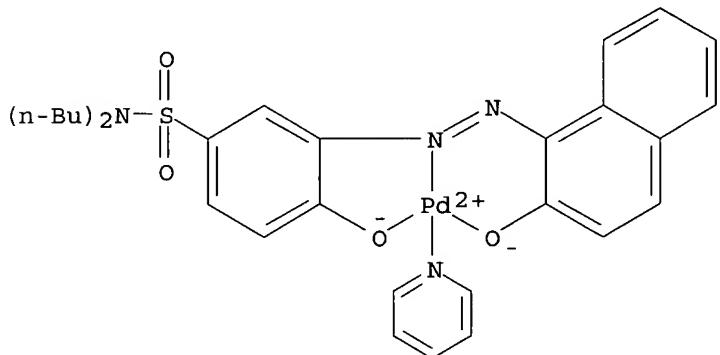
RN 158680-59-2 USPATFULL

CN Platinum, [[2,2'-(azo- $\kappa$ N)bis[phenolato- $\kappa$ O]](2-)][4-(1-butylpentyl)pyridine]-, (SP-4-2)- (9CI) (CA INDEX NAME)



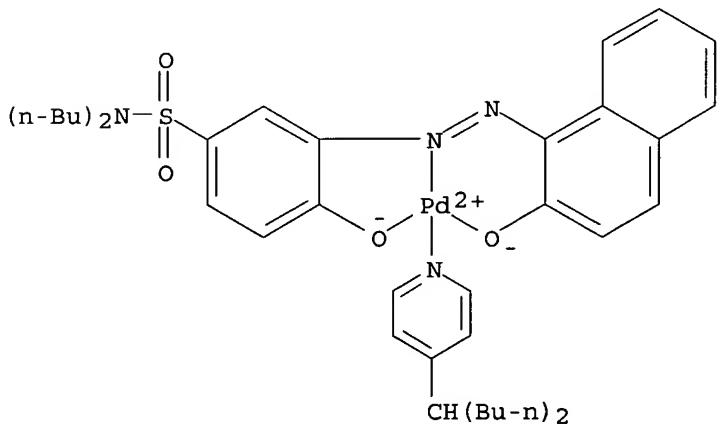
RN 158680-60-5 USPATFULL

CN Palladium, [N,N-dibutyl-4-hydroxy-3-[(2-hydroxy-1-naphthalenyl)azo]benzenesulfonamido(2-)](pyridine)-, (SP-4-2)- (9CI)  
(CA INDEX NAME)



RN 158680-61-6 USPATFULL

CN Palladium, [4-(1-butylpentyl)pyridine] [N,N-dibutyl-4-hydroxy-3-[(2-hydroxy-1-naphthalenyl)azo]benzenesulfonamido]-, (SP-4-2)- (9CI) (CA INDEX NAME)



L84 ANSWER 83 OF 105 USPATFULL on STN  
 ACCESSION NUMBER: 86:38252 USPATFULL  
 TITLE: Photographic products employing novel nondiffusible metal complexes of azo dyes  
 INVENTOR(S): Reczek, James A., Rochester, NY, United States  
 PATENT ASSIGNEE(S): Eastman Kodak Company, Rochester, NY, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 4598030		19860701
APPLICATION INFO.:	US 1985-761932		19850802 (6)
RELATED APPLN. INFO.:	Division of Ser. No. US 1985-688203, filed on 2 Jan 1985, now patented, Pat. No. US 4562139		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Schilling, Richard L.		
LEGAL REPRESENTATIVE:	Cole, Harold E.		
NUMBER OF CLAIMS:	17		
EXEMPLARY CLAIM:	12		
LINE COUNT:	984		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Photographic elements, diffusion transfer assemblages and coordination complexes are described which employ a novel nondiffusible compound capable of releasing at least one diffusible dye moiety having the formula: ##STR1## wherein: (a) D.<sup>sup.1</sup>, D.<sup>sup.2</sup> and D.<sup>sup.3</sup> each independently represents the atoms necessary to complete an aromatic heterocyclic nucleus having at least one ring of 5 to 7 atoms;

(b) Z.<sup>sup.1</sup> and Z.<sup>sup.2</sup> each independently represents the atoms necessary to complete an aromatic carbocyclic or heterocyclic nucleus having at least one ring of 5 to 7 atoms or a ketomethine group;

(c) G.<sup>sup.1</sup> and G.<sup>sup.2</sup> each independently represents a metal chelating group;

(d) Me is a polyvalent, hexacoordinate metal ion,

(e) CAR represents a ballasted carrier moiety capable of releasing the diffusible dye moiety as a function of development of the silver halide emulsion layer under alkaline conditions; and

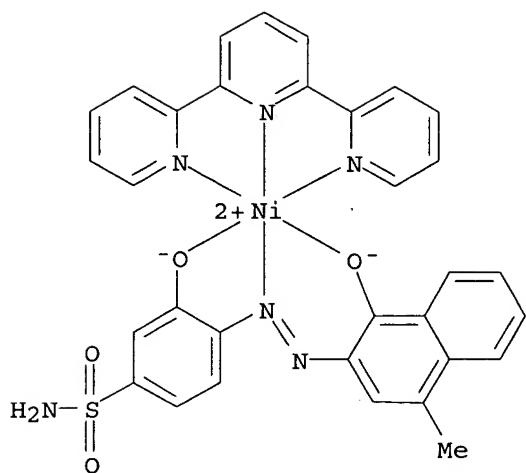
(f) n is 1, 2 or 3.

IT 101897-42-1P

(preparation and photog. redox dye releaser applications of)

RN 101897-42-1 USPATFULL

CN Nickel, [3-hydroxy-4-[(1-hydroxy-4-methyl-2-naphthalenyl)azo]benzenesulfon amidato(2-)](2,2':6',2''-terpyridine-N,N',N'')-, (OC-6-24)- (9CI) (CA INDEX NAME)

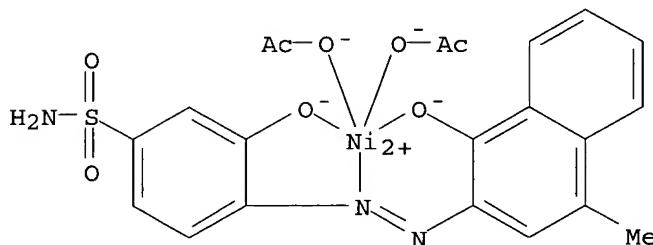


IT 101897-34-1P

(preparation and reaction of, with terpyridine)

RN 101897-34-1 USPATFULL

CN Nickelate(2-), bis(acetato-O) [3-hydroxy-4-[(1-hydroxy-4-methyl-2-naphthalenyl)azo]benzenesulfonamido(2-)]-, dihydrogen (9CI) (CA INDEX NAME)

● 2 H<sup>+</sup>

L84 ANSWER 84 OF 105 USPATFULL on STN

ACCESSION NUMBER: 85:76812 USPATFULL

TITLE: Photographic products employing novel nondiffusible metal complexes of azo dyes

INVENTOR(S): Reczek, James A., Rochester, NY, United States

PATENT ASSIGNEE(S): Eastman Kodak Company, Rochester, NY, United States (U.S. corporation)

	NUMBER	KIND	DATE
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PATENT INFORMATION:	US 4562139		19851231
APPLICATION INFO.:	US 1985-688203		19850102 (6)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Schilling, Richard L		
LEGAL REPRESENTATIVE:	Cole, Harold E.		

NUMBER OF CLAIMS: 23  
 EXEMPLARY CLAIM: 12  
 LINE COUNT: 1054

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Photographic elements, diffusion transfer assemblages and coordination complexes are described which employ a novel nondiffusible compound capable of releasing at least one diffusible dye moiety having the formula: ##STR1## wherein: (a) D.<sup>1</sup>, D.<sup>2</sup> and D.<sup>3</sup> each independently represents the atoms necessary to complete an aromatic heterocyclic nucleus having at least one ring of 5 to 7 atoms;

(b) Z.<sup>1</sup> and Z.<sup>2</sup> each independently represents the atoms necessary to complete an aromatic carbocyclic or heterocyclic nucleus having at least one ring of 5 to 7 atoms or a ketomethine group;

(c) G.<sup>1</sup> and G.<sup>2</sup> each independently represents a metal chelating group;

(d) Me is a polyvalent, hexacoordinate metal ion,

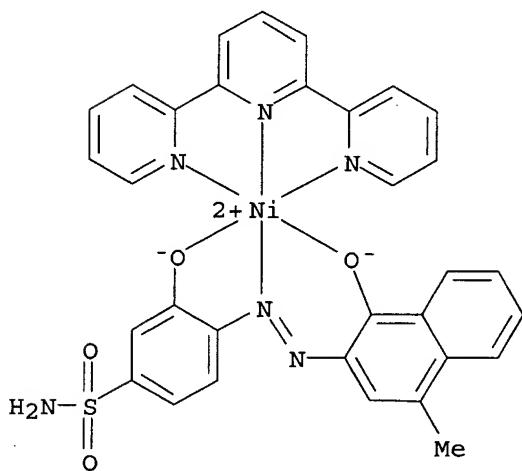
(e) CAR represents a ballasted carrier moiety capable of releasing the diffusible dye moiety as a function of development of the silver halide emulsion layer under alkaline conditions; and

(f) n is 1, 2 or 3.

IT 101897-42-1P  
 (preparation and photog. redox dye releaser applications of)

RN 101897-42-1 USPATFULL

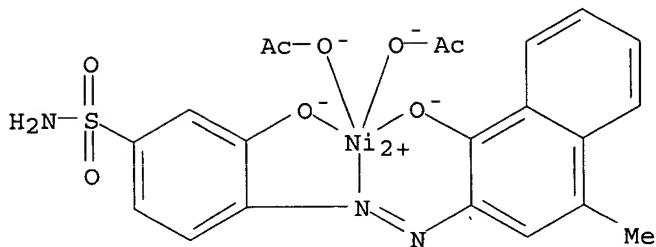
CN Nickel, [3-hydroxy-4-[(1-hydroxy-4-methyl-2-naphthalenyl)azo]benzenesulfonamidato(2-)](2,2':6',2'''-terpyridine-N,N',N'')-, (OC-6-24)- (9CI) (CA INDEX NAME)



IT 101897-34-1P  
 (preparation and reaction of, with terpyridine)

RN 101897-34-1 USPATFULL

CN Nickelate(2-), bis(acetato-O) [3-hydroxy-4-[(1-hydroxy-4-methyl-2-naphthalenyl)azo]benzenesulfonamidato(2-)]-, dihydrogen (9CI) (CA INDEX NAME)



● 2 H<sup>+</sup>

=> d ibib ed ab hitind 85-94

YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, USPATFULL, PASCAL, JICST-EPLUS, SCISEARCH, WPIX' - CONTINUE? (Y)/N:Y

'HITIND' IS NOT A VALID FORMAT

In a multifile environment, a format can only be used if it is valid in at least one of the files. Refer to file specific help messages or the STNGUIDE file for information on formats available in individual files.

REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT):ibib ed ab

L84 ANSWER 85 OF 105 PASCAL COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED.  
on STN

ACCESSION NUMBER: 2001-0423721 PASCAL  
COPYRIGHT NOTICE: Copyright .COPYRGT. 2001 INIST-CNRS. All rights reserved.  
TITLE (IN ENGLISH): Preparation and characterization of a new conducting polymer from o-aminoazotoluene azo dye  
AUTHOR: REHAN Hyman H.  
CORPORATE SOURCE: Chemistry Department, Faculty of Science, Cairo University, Giza, Egypt  
SOURCE: Materialwissenschaft und Werkstofftechnik, (2001), 32(3), 266-271, 47 refs.  
ISSN: 0933-5137  
DOCUMENT TYPE: Journal  
BIBLIOGRAPHIC LEVEL: Analytic  
COUNTRY: Germany, Federal Republic of  
LANGUAGE: English  
SUMMARY LANGUAGE: German  
AVAILABILITY: INIST-15546, 354000097570980070  
UP 20011030  
AB Anodic polymerization of o-aminoazotoluene azo dye on platinum electrodes in 0.5 M HCl in 50% v/v ethanol/water and in MeCN was studied by cyclic voltammetry. The formed films, in both media, were electroactive in acidic solutions but electroinactive in neutral and alkaline solutions and aprotic MeCN. The pair of redox peaks due to the electroactivity is attributed to a 1:1 proton + electron elimination (on oxidation)/addition (on reduction) at the aminolimino linkages which connect the aromatic nuclei. Chrono-coulometry showed that the kinetics of these processes were dominated by the transport of solvated protons and Cl<sup>-</sup> ions through the polymer films. Reduction of the polymer films in acid solutions led to their gradual degradation due to the

irreversible reduction of the azo groups in the polymer skeleton, while the reversible reduction of these groups in MeCN saved the polymer from degradation. The rate of electron transfer reactions of the redox couple  $[Fe(CN)_6]^{3-} / [Fe(CN)_6]^{4-}$  on polymer-covered platinum electrodes decreased substantially with increasing the polymer film thickness.

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ACCESSION NUMBER: 2000-0455829 PASCAL  
COPYRIGHT NOTICE: Copyright .COPYRGT. 2000 INIST-CNRS. All rights reserved.  
TITLE (IN ENGLISH): Electrosynthesis of conducting polymer films from the azo dye methoxy red  
AUTHOR: REHAN H. H.  
CORPORATE SOURCE: Chemistry Department, College of Education for Girls, PO Box 27104, Malaz, Riyadh 11417, Saudi Arabia  
SOURCE: Journal of applied electrochemistry, (2000), 30 (8), 945-951, 35 refs.  
ISSN: 0021-891X CODEN: JAELBJ  
DOCUMENT TYPE: Journal  
BIBLIOGRAPHIC LEVEL: Analytic  
COUNTRY: United Kingdom  
LANGUAGE: English  
AVAILABILITY: INIST-15602, 354000090668540070  
UP .20001123

AB Anodic polymerization of the azo dye methoxy red (4-methoxybenzene azo-1,3-diaminobenzene) on platinum electrodes in 1 M HCl in 50% V/V ethanol/water was found to yield thin and stable polymeric films. The films were electroactive in acidic solutions and the activity diminished as the acidity decreased. The pair of symmetrical redox peaks at a formal redox potential,  $(E^\circ) = 0.61$  V vs SCE, with a Nernstian slope  $dE/dpH = 0.06$  V, is attributed to a 1:1 proton + electron elimination (on oxidation)/addition (on reduction) at the amino/imino linkages which connect the aromatic nuclei. Chronocoulometric plots indicated that the transport of the solvated protons, and probably Cl<sup>-</sup> ions, through the film is the rate-determining step of the above redox processes. The rate of electron transfer reactions of the redox couple  $[Fe(CN)_6]^{3-} / [Fe(CN)_6]^{4-}$  on poly-methoxy red-covered platinum electrodes decreased by a factor of more than two orders of magnitude, compared to the bare electrodes.

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on STN

ACCESSION NUMBER: 1994-0373616 PASCAL  
COPYRIGHT NOTICE: Copyright .COPYRGT. 1994 INIST-CNRS. All rights reserved.  
TITLE (IN ENGLISH): Azo polymers for reversible optical storage. IV: Cooperative motion of rigid groups in semicrystalline polymers  
AUTHOR: NATANSOHN A.; ROCHON P.; PEZOLET M.; AUDET P.; BROWN D.; TO S.  
CORPORATE SOURCE: Queen's univ., dep. chemistry, Kingston ON K7L 3N6, Canada  
SOURCE: Macromolecules, (1994), 27 (9), 2580-2585  
ISSN: 0024-9297 CODEN: MAMOBX  
DOCUMENT TYPE: Journal  
BIBLIOGRAPHIC LEVEL: Analytic  
COUNTRY: United States

LANGUAGE: English  
 NOTE: 1/4 p. ref. et notes  
 AVAILABILITY: INIST-13789, 354000045424790290  
 UP 20001027

AB Polarized light induces a preferred orientation of azobenzene groups through photochemical trans-cis-trans processes. Stronger orientation tendencies exist if the azo-containing polymers are crystalline or liquid crystalline and the cooperative reorientation of nonactive mesogens of similar shape has been demonstrated. It is shown that cooperative reorientation is a more general phenomenon and can take place even for a nonactive rigid group of a different shape which is bonded in the main chain while the azobenzene groups are in the side chains. Comparison is made between a disperse red 1-containing amorphous azo polymer (pDR1A) and a disperse red 19-containing semicrystalline azo polymer (pDR19T) with phenylene diacrylate (PD) groups within the main chain

L84 ANSWER 88 OF 105 PASCAL COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED.  
 on STN

ACCESSION NUMBER: 1994-0217486 PASCAL  
 COPYRIGHT NOTICE: Copyright .COPYRGT. 1994 INIST-CNRS. All rights reserved.  
 TITLE (IN ENGLISH): The heat of oxidation of 1,2-di-n-butylhydrazine to azo-n-butane  
 AUTHOR: ENGEL P. S.; OWENS W. H.; CHENGRONG WANG  
 CORPORATE SOURCE: Rice univ., dep. chemistry, Houston TX 77251, United States  
 SOURCE: Journal of physical chemistry : (1952), (1993), 97(40), 10486-10488  
 ISSN: 0022-3654 CODEN: JPCHAX  
 DOCUMENT TYPE: Journal  
 BIBLIOGRAPHIC LEVEL: Analytic  
 COUNTRY: United States  
 LANGUAGE: English  
 NOTE: 1/4 p. ref. et notes  
 AVAILABILITY: INIST-549, 354000048129550360  
 UP 20001027

AB 1,2-Di-n-butylhydrazine in hexane solution has been oxidized to azo-n-butane with oxygen and Pd/C catalyst and with red mercuric oxide. Both methods led to the same calculated heat of hydrogenation ( $\Delta H_{\text{sub.H}}$ ) of the azo group in hexane, -16.4±0.3 kcal/mol. This value is 10.6 kcal/mol less exothermic than the  $\Delta H_{\text{sub.H}}$  of carbon-carbon double bonds

L84 ANSWER 89 OF 105 PASCAL COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED.  
 on STN

ACCESSION NUMBER: 1990-0247941 PASCAL  
 TITLE (IN ENGLISH): Reactions of azo and azoxy sulphones with transition metal complexes. VII:  
 Arylation of olefins with arylazoxy aryl sulphones catalysed by a palladium(0) phosphine complex  
 AUTHOR: KAMIGATA N.; FUKUSHIMA T.; SATOH A.; KAMEYAMA M.  
 CORPORATE SOURCE: Tokyo metropolitan univ., fac. sci., dep. chemistry, Setagaya-ku Tokyo 158, Japan  
 SOURCE: Perkin transactions. 1, (1990) (3), 549-553, 29 refs.  
 ISSN: 0300-922X CODEN: JCPRB4  
 DOCUMENT TYPE: Journal  
 BIBLIOGRAPHIC LEVEL: Analytic  
 COUNTRY: United Kingdom  
 LANGUAGE: English

AVAILABILITY: INIST-130C, 354000004526160170  
 UP 20001027  
 AB The arylation of acyclic and cyclic olefins by arylazoxy aryl sulphones has been investigated in the presence of a palladium(0) catalyst in benzene

L84 ANSWER 90 OF 105 PASCAL ©COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED.  
 on STN

ACCESSION NUMBER: 1982-0232907 PASCAL  
 TITLE (IN ENGLISH): Effect of polyelectrolytes on the rate of ligand-metal-ion reactions. I: 'Catalysis' of the complexation of nickel(II) with an azo-dye  
 AUTHOR: TONDRE C.  
 CORPORATE SOURCE: Univ. Nancy I, ERA CNRS, Vandoeuvre-Les-Nancy 54506, France  
 SOURCE: CS Faraday trans. I, (1982), 78(6), 1795-1808, 39 refs.  
 ISSN: 0300-9599  
 DOCUMENT TYPE: Journal  
 BIBLIOGRAPHIC LEVEL: Analytic  
 COUNTRY: United Kingdom  
 LANGUAGE: English  
 AVAILABILITY: CNRS-594A  
 UP 20030206

L84 ANSWER 91 OF 105 JICST-EPlus ©COPYRIGHT 2005 JST on STN  
 ACCESSION NUMBER: 1000025118 JICST-EPlus  
 TITLE: Kinetics of Micellar Catalyzed Reaction for Pyridine-2-azo-p-dimethylaniline-Ni<sup>2+</sup> and Ferrocene-Fe<sup>3+</sup> Systems.  
 AUTHOR: AKAZAWA TOMOAKI; SASAKI MUNEO; IKEDA YOSHIYUKI  
 CORPORATE SOURCE: Konan Univ., Fac. of Sci.  
 SOURCE: Nippon Kagakkai Koen Yokosu, (1999) vol. 76th, no. 1, pp. 209. Journal Code: S0493A  
 ISSN: 0285-7626  
 PUB. COUNTRY: Japan  
 LANGUAGE: Japanese  
 STATUS: New

AB Recently, the effect of microenvironment with the micelle was studied by many chemists. It was found that electrostatic and hydrophobic interaction between reacting system and micellar phase influences remarkably reactivity. We have studied micellar catalytic kinetics when the reacting species are little subjected to the charge separation on activation. In anionic micellar solution the micellar **catalysis** was investigated for complexation reaction of pyridine-2-azo-p-dimethyl aniline Ni(SUP)2+(/SUP), and in cationic micellar solution it was investigated for electron transfer reaction of ferrocene-Fe(SUP)3+(/SUP). With their kinetic investigation, their distribution constants between water and micellar phases were estimated by establishing suitable distribution models, and their activation parameters were discussed with reference to the effect of reaction field. (author abst.)

L84 ANSWER 92 OF 105 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation  
 on STN  
 ACCESSION NUMBER: 2004:207354 SCISEARCH  
 THE GENUINE ARTICLE: 776EB  
 TITLE: Use of an o-aminobenzoic acid-functionalized XAD-4 copolymer resin for the separation and preconcentration of

heavy metal(II) ions  
 AUTHOR: Cekic S D; Filik H; Apak R (Reprint)  
 CORPORATE SOURCE: Istanbul Univ, Dept Chem, Fac Engn, TR-34850 Istanbul,  
 Turkey (Reprint)  
 COUNTRY OF AUTHOR: Turkey  
 SOURCE: ANALYTICA CHIMICA ACTA, (3 MAR 2004) Vol. 505, No. 1, pp.  
 15-24.  
 ISSN: 0003-2670.  
 PUBLISHER: ELSEVIER SCIENCE BV, PO BOX 211, 1000 AE AMSTERDAM,  
 NETHERLANDS.  
 DOCUMENT TYPE: Article; Journal  
 LANGUAGE: English  
 REFERENCE COUNT: 18  
 ENTRY DATE: Entered STN: 12 Mar 2004  
 Last Updated on STN: 12 Mar 2004  
 \*ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS\*

ED    Entered STN: 12 Mar 2004  
 Last Updated on STN: 12 Mar 2004  
 AB    XAD copolymer resins maybe functionalized with heavy metal ion-selective ligands either by covalent linkage to the polymer backbone or by impregnation. These resins may be tailored to be specific for certain heavy metals by adjusting the adsorption and elution parameters, thereby enabling simple and cost-effective spectrophotometric and flame atomic absorption spectrometry (FAAS) determinations of these metals without requiring the more sophisticated coupled instrumental techniques. For the synthesis of o-aminobenzoic acid (ABA)-immobilized XAD-4 copolymer resin that is expected to preconcentrate a number of transition and heavy metals, the azo-linkage method was chosen. For this purpose the copolymer was nitrated, reduced to the corresponding amine, converted to the diazonium salt with nitrite, and reacted with o-aminobenzoic acid to produce the XAD-ABA sorbent. This sorbent was capable of preconcentrating Pb(II), Cd(II), Ni(II), Co(II) and Zn(II) from weakly acidic or neutral aqueous solution. The retained metals were eluted with 1.0 M HNO<sub>3</sub> from the resin column, and were subsequently determined with by flame atomic absorption spectrometry. The developed resin preconcentration and determination method was successfully applied to the analysis of a synthetic metal mixture solution, a certified reference material (CRM) of coal sample, and brackish lake water. (C) 2003 Elsevier Science B.V. All rights reserved.

L84 ANSWER 93 OF 105 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation  
 on STN  
 ACCESSION NUMBER: 1993:562049 SCISEARCH  
 THE GENUINE ARTICLE: LW799  
 TITLE: SYNTHESIS OF ARYLAZOSTILBENES AND ARYLAZOSTOLANES BY THE HECK REACTION  
 AUTHOR: JEOUNG C B (Reprint); HAAK O; GRAHN W; BOLDT P  
 CORPORATE SOURCE: TECH UNIV CAROLO WILHELMINA BRAUNSCHWEIG, INST ORGAN CHEM,  
 HAGENRING 30, D-38092 BRAUNSCHWEIG, GERMANY  
 COUNTRY OF AUTHOR: GERMANY  
 SOURCE: JOURNAL FUR PRAKTISCHE CHEMIE-CHEMIKER-ZEITUNG, (1993)  
 Vol. 335, No. 6, pp. 521-531.  
 ISSN: 0941-1216.  
 PUBLISHER: JOHANN AMBROSIUS BARTH VERLAG, IM WEIHER 10, D-69121  
 HEIDELBERG, GERMANY.  
 DOCUMENT TYPE: Article; Journal  
 FILE SEGMENT: PHYS; ENGI  
 LANGUAGE: German  
 REFERENCE COUNT: 39  
 ENTRY DATE: Entered STN: 1994

Last Updated on STN: 1994  
 \*ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS\*

ED Entered STN: 1994  
 Last Updated on STN: 1994  
 AB The palladium-catalysed coupling of p-bromo azo dyes 4 with styrenes 6 and arylacetylenes 9 provides arylazostilbenes 7 and -tolanes 10, respectively, in fair-to-good yields. Likewise, coupling of azoxy compound 5 with styrenes 6 forms the arylazoxystilbenes 8 in high yields. The influence of substituents on light absorption of the new dyes as well as on the C-13-NMR shifts of the azotolanes 10 are discussed.

L84 ANSWER 94 OF 105 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN  
 ACCESSION NUMBER: 1984:131085 SCISEARCH  
 THE GENUINE ARTICLE: SF394  
 TITLE: COMPLEXES OF PALLADIUM(II) WITH SOME AZO COMPOUNDS AND THEIR CATALYTIC PROPERTIES  
 AUTHOR: SAFRONOVA L A (Reprint); SHEBALDOVA A D; KHIDEKEL M L  
 CORPORATE SOURCE: NG CHERNSHEVSKII STATE UNIV, CHEM RES INST, SARATOV, USSR (Reprint)  
 COUNTRY OF AUTHOR: USSR  
 SOURCE: ZHURNAL OBRASHCHEI KHMII, (1984) Vol. 54, No. 2, pp. 385-388.  
 ISSN: 0044-460X.  
 PUBLISHER: MEZHDUNARODNAYA KNIGA, 39 DIMITROVA UL., 113095 MOSCOW, RUSSIA.  
 DOCUMENT TYPE: Article; Journal  
 FILE SEGMENT: PHYS  
 LANGUAGE: Russian  
 REFERENCE COUNT: 7  
 ENTRY DATE: Entered STN: 1994  
 Last Updated on STN: 1994  
 ED Entered STN: 1994  
 Last Updated on STN: 1994

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 YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, USPATFULL, PASCAL, JICST-EPLUS, SCISEARCH, WPIX' - CONTINUE? (Y)/N:y

YOU HAVE REQUESTED DATA FROM 11 ANSWERS - CONTINUE? Y/(N):y

L84 ANSWER 95 OF 105 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 2003-317763 [31] WPIX  
 DOC. NO. NON-CPI: N2003-253165  
 DOC. NO. CPI: C2003-083512  
 TITLE: Optical recording medium, e.g. digital versatile disc, contains trimethine cyanine dye and azo metal chelate compound.  
 DERWENT CLASS: E21 E23 G05 L03 P75 T03  
 PATENT ASSIGNEE(S): (RICO) RICOH KK  
 COUNTRY COUNT: 1  
 PATENT INFORMATION:

PATENT NO	KIND DATE	WEEK	LA	PG MAIN IPC
JP 2002274044	A 20020925 (200331)*		16	B41M005-26

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 2002274044	A	JP 2001-86254	20010323

PRIORITY APPLN. INFO: JP 2001-3183 20010111

## INT. PATENT CLASSIF.:

MAIN:	B41M005-26
SECONDARY:	G11B007-24
ADDITIONAL:	C09B023-00; C09B045-00; C09B067-22

## BASIC ABSTRACT:

JP2002274044 A UPAB: 20030516

NOVELTY - An optical recording medium contains a trimethine cyanine dye and an azo metal chelate compound which comprises azo compound (I) and metal, in a weight ratio of 90:10-10:90.

DETAILED DESCRIPTION - An optical recording medium comprises a recording layer on a base plate. The layer contains a trimethine cyanine dye and an azo metal chelate compound which comprises an azo compound of formula (I) and metal. The ratio of trimethine cyanine dye to azo metal chelate compound is 90:10-10:90 by weight.

R1-R6 = optionally substituted alkyl;

Z' = substituent having active hydrogen group e.g. OH, carboxyl, amino, alkylcarboxamide, arylcarboxamide, alkylsulfonamide, arylsulfonamide, carbamoyl, alkylcarbamoyl, arylcarbamoyl, sulfo, sulfino, sulfeno or sulfamoyl.

USE - The recording medium is useful for mass storage recordable photo compact disc e.g. DVD-R (Digital Versatile Disc-Recordable).

ADVANTAGE - The medium can be recorded and reproduced with laser beam of wavelength 670 nm or less with stable high reflectance and high modulation. it has good light resistance and storage stability. The light resistance is better than that of an optical recording medium using a trimethine cyanine dye alone. The medium can be recorded in high density and reproduced stably.

Dwg. 0/3

FILE SEGMENT: CPI EPI GMPI

FIELD AVAILABILITY: AB; GI; DCN

MANUAL CODES: CPI: E21-B03; E21-B04; E25-B03; G06-D07; G06-F05;  
L03-G04B

EPI: T03-B01D1; T03-B01D6

TECH UPTX: 20030516

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Compounds: The metal atom in the azo metal chelate is Mn, Co, Ni or Cu. The trimethine cyanine dye is a compound of formula (II).

R7, R8 = optionally substituted alkyl;

Y = H, halogen or optionally substituted alkyl or alkyloxy; and

X- = mono-valent anion.

TECHNOLOGY FOCUS - IMAGING AND COMMUNICATION - Preferred Recording Medium: The refractive index, n, of the single recording layer is 1.5-3.0 (to light of reconstruction wavelength, plus or minus 5 nm) and the extinction coefficient, k, is 0.02-0.3. The optical recording medium has track pitch on the substrate of 0.7-0.8 micron and half groove width of 0.18-0.40 micron. The medium is recorded at wavelength 600-720 nm.

ABEX UPTX: 20030516

EXAMPLE - On a polycarbonate plate (0.6 mm thick) was formed a guide groove having a depth of 1750 Angstrom, half groove width of 0.25 micron and track pitch of 0.74 micron. A 2,2,3,3-tetrafluoropropanol solution of a compound of formula (A1) (50 parts by weight) and a compound of formula

(B3) (50 parts by weight) was applied on the plate by spinning to give an organic dye layer having a thickness of 1000 Angstrom. A reflection layer having a thickness of 1300 Angstrom was formed with silver on the organic dye layer by a sputter process. On the reflection layer, a protective layer having a thickness of 5 micron was formed with an acrylic type photopolymer. The protective layer was bonded with a polycarbonate board having a thickness of 5 micron with an acrylic type photopolymer to give an optical recording medium. The recording medium had (i) reflectance of 63% and modulation of 63% initially stage, (ii) 64% and 62%, respectively, after continuous exposure to Xe light of 40,000 Lux for 20 hours and (iii) 64% and 63%, respectively, after storing at 60 degreesC at 90 % RH for 600 hours.

L84 ANSWER 96 OF 105 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 2003-150262 [15] WPIX  
 DOC. NO. NON-CPI: N2003-118592  
 DOC. NO. CPI: C2003-039081  
 TITLE: Optical recording medium for e.g., digital versatile disc recordable system, includes recording layer comprising squarylium metal chelate compound and azo metal chelate compound or formazan metal chelate compound.  
 DERWENT CLASS: E21 E23 L03 P75 T03  
 INVENTOR(S): KINUGASA, M; NOGUCHI, S; SATOH, T; SHIMIZU, I; TOMURA, T; TOYODA, H; UENO, Y; YAMADA, S; SATO, T  
 PATENT ASSIGNEE(S): (KYOW) KYOWA HAKKO KOGYO KK; (KYOX) KYOWA YUKA KK; (RICO) RICOH KK  
 COUNTRY COUNT: 28  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
EP 1267338	A2	20021218 (200315)*	EN	78	G11B007-24		
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT							
RO SE SI TR							
JP 2002370451	A	20021224 (200315)		20	B41M005-26		
JP 2002370452	A	20021224 (200315)		22	B41M005-26		
JP 2002370453	A	20021224 (200315)		19	B41M005-26		
JP 2002370454	A	20021224 (200315)		18	B41M005-26		
US 2003157291	A1	20030821 (200356)			B32B003-02		
US 6737143	B2	20040518 (200433)			B32B003-00		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 1267338	A2	EP 2002-13100	20020613
JP 2002370451	A	JP 2001-180475	20010614
JP 2002370452	A	JP 2001-180538	20010614
JP 2002370453	A	JP 2001-180565	20010614
JP 2002370454	A	JP 2001-180606	20010614
US 2003157291	A1	US 2002-166742	20020611
US 6737143	B2	US 2002-166742	20020611

PRIORITY APPLN. INFO: JP 2001-180606 20010614; JP  
 2001-180475 20010614; JP  
 2001-180538 20010614; JP  
 2001-180565 20010614

INT. PATENT CLASSIF.: MAIN: B32B003-00; B32B003-02; B41M005-26; G11B007-24

SECONDARY: C09B023-00; C09B045-00; C09B045-14;  
 C09B045-20; C09B045-22; C09B050-00;  
 C09B050-06; C09B057-00; C09B069-02; G11B007-0045

**BASIC ABSTRACT:**

EP 1267338 A UPAB: 20030303

**NOVELTY** - An optical recording medium comprises a substrate (1) and recording layer(s) (2). The recording layer comprises squarylium metal chelate compound(s) comprising a squarylium compound and a metal; and azo metal chelate compound(s) comprising another metal and an azo compound or formazan metal chelate compound(s) comprising another metal and formazan compound(s).

**DETAILED DESCRIPTION** - An optical recording medium comprises a substrate and recording layer(s). The recording layer comprises squarylium metal chelate compound(s) comprising a squarylium compound and a metal and:

(A) azo metal chelate compound(s) comprising another metal and an azo compound of formula (A-I);

(B) azo metal chelate compound(s) comprising another metal and an azo compound of formula (B-I);

(C) formazan metal chelate compound(s) comprising another metal and formazan compound(s) of formula (C-I) or (C-II); or

(D) formazan metal chelate compound(s) comprising a metal and formazan compound(s) of formula (D-I) or (D-II):

A0, B0 = residue forming (i) heterocyclic ring which may comprise a substituent or (ii) aromatic ring which may comprise a substituent, by combination with corresponding carbon atoms respectively bonded to A1 or B1;

X = active hydrogen-containing substituent.

Z, Z1, Z2 = residue forming a 5- or 6-membered nitrogen-containing heterocyclic ring which may have a substituent by combination with the carbon atom and the nitrogen atom bonded to Z, Z1 and Z2, respectively, and may be condensed with another aromatic ring;

A, A1, A2 = alkyl, aryl, alkylcarbonyl, arylcarbonyl, alkenyl, heterocyclic residue, or alkoxy carbonyl (all optionally having substituent);

B' = alkyl, alkenyl or aryl (all optionally having substituent);

B1, B2 = alkylene or arylene (all optionally having substituent);

W1 = -CH2- or -SO2-;

m, n = 0 or 1.

**USE** - The optical recording medium is for an optical recording device. It is for exposing to a light beam having a wavelength of 600-720 nm to carry out recording. (All claimed). The optical recording medium is for a digital versatile disc recordable (DVD-R) system.

**ADVANTAGE** - The metal-chelated squarylium compound provides an optical recording medium with high reliability, high reflectivity and low jitter. The medium also has higher light resistance and higher shelf life. The absorption coefficient of the recording medium is improved.

**DESCRIPTION OF DRAWING(S)** - The figure shows cross-sectional views of overwritable optical recording media to which the optical recording medium of the invention has been applied.

Substrate 1

Recording layer 2

Dwg. 1/3

FILE SEGMENT: CPI EPI GMPI

FIELD AVAILABILITY: AB; GI; DCN

MANUAL CODES: CPI: E21-C10; E21-C15; E21-C17; E21-C18; E25-B03;  
 E25-E03; L03-G04B

EPI: T03-B01

TECH UPTX: 20030303

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Composition: The

recording layer comprises squarylium metal chelate compound-azo metal chelate compound weight ratio of 90:10 - 20:80 or squarylium metal chelate compound-formazan metal chelate compound weight ratio of 90:10 - 50:50. Preferred Compounds: The azo metal chelate compound is ionized and forms a salt with another compound ion. The other compound has an amino group. The squarylium metal chelate compound may be of formula (A-II):

R<sub>1</sub>, R<sub>2</sub> = H or alkyl, aralkyl, aryl or heterocyclic group (all optionally having substituent);

M<sub>1</sub> = metal atom having coordination capacity, preferably Al; m<sub>1</sub> = 2 or 3;

Either R<sub>3</sub>, R<sub>4</sub> = optionally substituted alkyl; or

R<sub>3</sub>R<sub>4</sub> = alicyclic hydrocarbon ring or heterocyclic ring by combination with adjacent carbon atoms;

R<sub>5</sub> = H or alkyl, aralkyl or aryl (all optionally having substituent);

R<sub>6</sub> = H, cyano, nitro or alkyl, aralkyl, aryl, or alkoxy (all optionally having substituent);

n = 0-4.

When n = 2-4, R<sub>6</sub> may form aromatic ring which may have a substituent by combination with the adjacent two carbon atoms.

The squarylium compound may also be of formula (D-III) or (D-VI):

Either R<sub>1</sub>, R<sub>2</sub> = H or alkyl, aralkyl, aryl or heterocyclic (all optionally having substituent); or

NR<sub>1</sub>R<sub>2</sub> = heterocyclic ring which may have a substituent;

R<sub>3</sub> = formula (D-IV)-(D-V);

Either R<sub>4</sub>, R<sub>5</sub> = H or optionally substituted alkyl; or

NR<sub>4</sub>R<sub>5</sub> = heterocyclic ring which may have substituent;

R<sub>6</sub>-R<sub>9</sub> = H, optionally substituted alkyl or alkoxy, hydroxyl or halo;

R<sub>4</sub> and R<sub>6</sub> or R<sub>5</sub> and R<sub>7</sub> = optionally substituted nitrogen-containing heterocyclic ring by combination with adjacent N-C-C;

Q<sub>1</sub>, Q<sub>2</sub> = C or N;

R<sub>10</sub>, R<sub>11</sub> = H or optionally substituted alkyl, aryl or aralkyl, or hydroxyl provided that when Q<sub>1</sub> is N, R<sub>11</sub> does not exist;

R<sub>12</sub> = H or optionally substituted alkyl, aryl or aralkyl;

Either R<sub>13</sub>, R<sub>14</sub> = H, optionally substituted alkyl or alkoxy, or halo; or R<sub>13</sub>, R<sub>14</sub> = optionally substituted alicyclic hydrocarbon ring, aromatic ring or heterocyclic ring by combination with adjacent two carbon atoms;

R<sub>15</sub> = H or optionally substituted alkyl, aryl or heterocyclic;

R<sub>16</sub> = H, halo or optionally substituted alkyl, alkoxy, aralkyl, aryl, amino or heterocyclic;

Either R<sub>17</sub>, R<sub>18</sub> = optionally substituted alkyl; or

CR<sub>17</sub>R<sub>18</sub> = optionally substituted alicyclic hydrocarbon ring or heterocyclic ring provided that if Q<sub>2</sub> is N, R<sub>18</sub> does not exist;

R<sub>19</sub> = H or optionally substituted alkyl, aralkyl or aryl;

R<sub>20</sub> = halo, trifluoromethyl, nitro, cyano, or optionally substituted alkyl, aralkyl or aryl;

When n = 2-4, any adjacent two R<sub>20</sub>s by combination with the adjacent two carbon atoms may form an optionally substituted aromatic ring.

**TECHNOLOGY FOCUS - INORGANIC CHEMISTRY** - Preferred Atoms: The metal atom of the azo metal chelate compound is manganese, cobalt, nickel, and/or copper. The metal atom of the formazan metal chelate compound is vanadium, manganese, iron, cobalt, nickel, copper, zinc and/or palladium, and/or their oxides or halides.

**TECHNOLOGY FOCUS - METALLURGY** - Preferred Materials: The optical recording medium further comprises a reflective layer containing gold, silver, copper, aluminum, or an alloy.

**TECHNOLOGY FOCUS - IMAGING AND COMMUNICATION** - Preferred Properties: The refractive index (n) of a single layer of the recording layer is 1.5-3.0

and the extinction coefficient ( $k$ ) is 0.02-0.3 against the light having a wavelength range of a recording or reproducing wavelength  $\pm 5$  nm. The track pitch on the substrate falls within 0.7-0.8  $\mu\text{m}$  and the groove width at a half bandwidth fall within 0.18-0.40  $\mu\text{m}$ . The optical recording medium is recordable at a wavelength of 600-720 nm.

ABEX

UPTX: 20030303

EXAMPLE - A mixture of an azo metal chelate compound (X) and squarylium metal chelate compound (XI) in a 50:50 weight ratio dissolved in 2,2,3,3-tetrafluoropropanol was applied by a spinner onto an injection-molded polycarbonate substrate having a thickness of 0.6 mm and equipped with a guide groove with a depth of 1780 Angstrom, a half bandwidth of 0.37  $\mu\text{m}$  and a track pitch of 0.74  $\mu\text{m}$ . An organic dye layer having a thickness of 900 Angstrom was formed. A gold reflective layer of 1300 Angstrom thick was then overlaid by sputtering, followed by the formation of a protective layer of 6  $\mu\text{m}$  thick by using an acrylic photopolymer. Another injection molded polycarbonate substrate of 0.6 mm thick was stacked over the protective layer and they were adhered with an acrylic photopolymer to obtain an optical recording medium:

L84 ANSWER 97 OF 105 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 2002-341983 [38] WPIX  
 DOC. NO. CPI: C2002-098284  
 TITLE: Solid pigment formulations, used in printing ink, paint, bulk coloration of polymer or spin coloration of fibers, are based on metal complexes of azo-pyrimidine compounds and intercalated compounds with specified iron content.  
 DERWENT CLASS: A60 E21 F06 G02  
 INVENTOR(S): FAUBION, K; GOEBEL, R; HERRMANN, U; LINKE, F; GOBEL, R  
 PATENT ASSIGNEE(S): (FARB) BAYER AG; (FAUB-I) FAUBION K; (HERR-I) HERRMANN U; (LINK-I) LINKE F  
 COUNTRY COUNT: 30  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
<hr/>						
EP 1174473	A2	20020123 (200238)*	GE	16	C09B067-22	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT						
RO SE SI TR						
CZ 2001002645	A3	20020313 (200238)			C09B045-12<--	
DE 10035494	A1	20020131 (200238)			C09B045-22<--	
JP 2002080744	A	20020319 (200238)		13	C09B067-20	
US 2002111465	A1	20020815 (200256)			C09B045-00<--	
MX 2001007405	A1	20020501 (200368)			C09B067-22	

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
<hr/>			
EP 1174473	A2	EP 2001-115789	20010711
CZ 2001002645	A3	CZ 2001-2645	20010719
DE 10035494	A1	DE 2000-10035494	20000721
JP 2002080744	A	JP 2001-213456	20010713
US 2002111465	A1	US 2001-907161	20010717
MX 2001007405	A1	MX 2001-7405	20010720

PRIORITY APPLN. INFO: DE 2000-10035494 20000721  
 INT. PATENT CLASSIF.:

MAIN: C09B045-00; C09B045-12;  
 C09B045-22; C09B067-20; C09B067-22  
 SECONDARY: C07F015-02; C07F015-04; C07F019-00; C08K005-56;  
 C09B045-14; C09D005-06; C09D011-00; C09D011-02;  
 C09D017-00; C09D201-00; D06P001-10; D06P005-00

**BASIC ABSTRACT:**

EP 1174473 A UPAB: 20030214

**NOVELTY** - In solid pigment formulations containing metal complex(es) (I) of an azo-pyrimidine compound (II), which may have substituent(s) and/or condensed ring system(s), and other intercalated compound(s) (III) as pigment. (I) contains not less than 30 ppm iron (Fe) with respect to (I) and (III).

**DETAILED DESCRIPTION** - In solid pigment formulations containing metal complex(es) (I) of an azo-pyrimidine compound (II), which may have substituent(s) and/or condensed ring system(s), of the given formula and other intercalated compound(s) (III) as pigment. (I) contains not less than 30 ppm iron (Fe) with respect to (I) and (III):

X, Y = rings optionally mono- or di-substituted by oxo (=O), thio (=S), imino (=NR<sub>7</sub>), amino (-NR<sub>6</sub>R<sub>7</sub>), oxy (-OR<sub>6</sub>), mercapto (-SR<sub>6</sub>), carboxyl (-COOR<sub>6</sub>), cyano (-CN), amido (-CONR<sub>6</sub>R<sub>7</sub>), sulfonyl (-SO<sub>2</sub>R<sub>8</sub>), cyanamino (-N(R<sub>6</sub>)-CN), alkyl, cycloalkyl, aryl or aralkyl, in which each ring has a total of 3 endo- and exocyclic double bonds;

R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> = H, (cyclo)alkyl or ar(alk)yl or complete a 5- or 6-membered ring optionally with other condensed ring(s);

R<sub>5</sub> = -OH, -NR<sub>6</sub>R<sub>7</sub>, (cyclo)alkyl or ar(alk)yl;

R<sub>6</sub> = hydrogen (H), (cyclo)alkyl or ar(alk)yl;

R<sub>7</sub> = H, CN, alkyl, (cyclo)alkyl, ar(alk)yl or acyl;

R<sub>8</sub> = (cyclo)alkyl or ar(alk)yl;

R<sub>1-8</sub> = groups in which CH groups may be substituted; and

m, n, o, p = 1 or, if the double bond indicated by the dotted line starts from the N atom, also 0.

An INDEPENDENT CLAIM is also included for the preparation of the pigment formulation by complexing an iron salt and another metal salt with (II) in amounts giving the specified iron content in the product, and reacting the resultant (I) with (III).

**USE** - The pigment formulation is used in the production of printing inks, binder paints, for bulk coloration of synthetic, semisynthetic or natural macromolecular materials, especially polyvinyl chloride, polystyrene, polyamide, polyethylene or polypropylene, for spin coloration of natural, regenerated or artificial fibers, e.g. cellulose, polyester, polycarbonate, polyacrylonitrile or polyamide fibers, and for printing textiles and paper (all claimed). They are also useful in lacquers of all types and for coloring paper and printing laminates.

**ADVANTAGE** - Pigments described in EP-A-73463 and EP-A-994164 have valuable color properties but are of limited application, as the properties can be changed only by costly after-treatment, e.g. tempering, milling or coating. The present new pigment forms no longer have this drawback. They can be isolated by filtration of an aqueous suspension, washing and drying and then ground. They have especially good dispersibility and high strength of color and are very finely divided. The solid formulations are excellent for all pigmentation purposes.

Dwg.0/0

FILE SEGMENT: CPI

FIELD AVAILABILITY: AB; GI; DCN

MANUAL CODES: CPI: A08-E04; E21-C13; E21-C17; F03-F05; F03-F06;  
 F03-F07; F03-F09; F03-F17; F03-F30; G02-A03A;  
 G02-A04B

TECH UPTX: 20020618

**TECHNOLOGY FOCUS - ORGANIC CHEMISTRY** - Preferred Formulation: The pigment formulation contains 30-2000 ppm Fe with respect to the sum of the

complex(es) (I) and intercalated compound(s) (III). It contains not less than 2 metal complexes of (II), one being an Fe complex, each intercalated with (III). (II) preferably is an azopyrimidone compound of formula (IIA) or (IIB).

R'5 = -OH or -NH2;

R'1, R'2, R'3, R'4 = H; and

M'1, M1 = H, -OH, -NH2, -NHCN, arylamino or acylamino.

(I) are complexes of the mono-, di-, tri- and tetraanions of (II) with lithium (Li), magnesium (Mg), iron (Fe), cobalt (Co), aluminum (Al), chromium (Cr) and/or especially sodium (Na), potassium (K), calcium (Ca), barium (Ba), nickel (Ni), zinc (Zn), copper (Cu), manganese (Mn) and/or lanthanum (La), particularly the Ni salt or complex of (II). The intercalated compound is a cyclic or acyclic organic compound, especially melamine.

ABEX

UPTX: 20020618

SPECIFIC COMPOUNDS - A specific example of the azo compound (II) is azobarbituric acid of formula (IIC).

A specific example of the intercalated compound (III) is melamine.

EXAMPLE - 5 kg suspension containing 12.5 weight% potassium salt of azobarbituric acid were treated with 24.9 weight% nickel chloride hexahydrate (NiCl<sub>2</sub> · 6 H<sub>2</sub>O) (1970 g) solution. Then iron-II sulfate heptahydrate (FeSO<sub>4</sub> · 7 H<sub>2</sub>O) solution was optionally added and melamine (504 g) was stirred in and the suspension was made up to 10 liters with deionized water. It was then heated to 98 degrees C, with vigorous stirring, and kept at this temperature for 4 hours. After adjusting to pH 5 with 5% potassium hydroxide solution, the suspension was filtered and the product was washed, dried in vacuo and ground in a laboratory mill. The resultant pigment powder was added to a melamine-alkyl with lacquer, according to DIN 53238 and evaluated. A control (A) containing no FeSO<sub>4</sub> · 7 H<sub>2</sub>O was compared with samples treated with (B) 0.145, (C) 0.29, (D) 0.435, (E) 0.58, (F) 5.8 g FeSO<sub>4</sub> · 7 H<sub>2</sub>O, corresponding to Fe contents of (A) 0, (B) 25, (C) 50, (D) 75, (E) 100, (F) 1000 ppm. The surface area of the pigment was (A) 106, (B) 140, (C) 153, (D) 138, (E) 170, (F) 145 m<sup>2</sup>/g; and the relative strength of color in the lacquer was (A) 100, (B) 114, (C) 118, (D) 120, (E) 135, (F) 116%.

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ACCESSION NUMBER: 2002-083874 [12] WPIX

DOC. NO. NON-CPI: N2002-062261

DOC. NO. CPI: C2002-025699

TITLE: Pigments used in color filters for liquid crystal displays, photolacquers and printing inks are intercalation or inclusion compounds or solid solutions of azobarbituric acid metal complex and e.g. melamine or polymer.

DERWENT CLASS: A21 A25 A89 E21 E23 G02 G06 L03 P81 P85 U14 W05

INVENTOR(S): FAUBION, K; HERRMANN, U; NYSSEN, P; RICHTER, R; WITT, J; WOLF, M

PATENT ASSIGNEE(S): (FARB) BAYER AG; (FAUB-I) FAUBION K; (HERR-I) HERRMANN U; (NYSS-I) NYSSEN P; (RICH-I) RICHTER R; (WITT-I) WITT J; (WOLF-I) WOLF M

COUNTRY COUNT: 32

PATENT INFORMATION:

PATENT NO	KIND DATE	WEEK	LA	PG	MAIN IPC
DE 10025303	A1 20011011 (200212)*		18	C09B045-12<--	
CA 2342465	A1 20011004 (200212)	EN		C09B045-14<--	
EP 1146087	A1 20011017 (200212)	GE		C09B045-14<--	

R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT  
 RO SE SI TR

CN 1318593	A 20011024 (200213)	C09B045-48---
JP 2001354869	A 20011225 (200216)	20 C09B067-20
KR 2001095243	A 20011103 (200223)	C09B062-012
US 2002034696	A1 20020321 (200224)	G02F001-1335
US 6596446	B2 20030722 (200354)	G02B005-20
EP 1146087	B1 20031105 (200377) GE	C09B045-14---
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR		
DE 50100889	G 20031211 (200382)	C09B045-14---
TW 593558	A 20040621 (200506)	C09B045-00---

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 10025303	A1	DE 2000-10025303	20000522
CA 2342465	A1	CA 2001-2342465	20010330
EP 1146087	A1	EP 2001-106443	20010323
CN 1318593	A	CN 2001-117890	20010404
JP 2001354869	A	JP 2001-104524	20010403
KR 2001095243	A	KR 2001-17541	20010403
US 2002034696	A1	US 2001-825322	20010403
US 6596446	B2	US 2001-825322	20010403
EP 1146087	B1	EP 2001-106443	20010323
DE 50100889	G	DE 2001-00100889	20010323
		EP 2001-106443	20010323
TW 593558	A	TW 2001-108052	20010404

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
DE 50100889	G Based on	EP 1146087

PRIORITY APPLN. INFO: DE 2000-10016665 20000404 ✓

## INT. PATENT CLASSIF.:

MAIN:	C09B045-00; C09B045-12; C09B045-14; C09B045-48; C09B062-012; C09B067-20; G02B005-20; G02F001-1335
SECONDARY:	C09B045-08; C09B045-22; C09B067-22; C09D011-00; C09D011-02; G02B005-22; G02F001-13; G03F007-004; G03F007-04; G09F009-35

## BASIC ABSTRACT:

DE 10025303 A UPAB: 20020416

NOVELTY - Pigments used in color filters for liquid crystal displays comprise metal complex intercalates of metal ions with mono-, di-, tri- or tetraanions of azobarbituric acid compounds or their tautomers, substituted by hydroxyl, amino, cyanimino, acyl(aryl)amino groups in the 2,2'-positions and OH or NH<sub>2</sub> groups in the 5,5'-positions of the pyrimidin-4-one rings, intercalated with different compound(s).

DETAILED DESCRIPTION - Pigments used in color filters for liquid crystal displays comprise metal complex intercalates (I) of:

(a) metal ions, selected from lithium (Li), cesium (Cs), magnesium (Mg), cadmium (Cd), cobalt (Co), aluminum (Al), chromium (Cr), tin (Sn), lead (Pb) and especially sodium (Na), potassium (K), calcium (Ca), strontium (Sr), barium (Ba), zinc (Zn), iron (Fe), nickel (Ni), copper (Cu), manganese (Mn) and lanthanum (La), with

(b) mono-, di-, tri- or tetraanions of azobarbituric acid compounds (II) or their tautomers, substituted by hydroxyl (OH), amino (NH<sub>2</sub>),

cyanimino (NH-CN), acylamino or arylamino groups in the 2,2'-positions and OH or NH<sub>2</sub> groups in the 5,5'-positions of the pyrimidin-4-one rings, intercalated with

(c) different compound(s).

R, R' = OH, NH<sub>2</sub>, NH-CN, acylamino or arylamino;

R<sub>1</sub>, R<sub>1'</sub> = OH or NH<sub>2</sub>.

USE - Compounds (I) are used in printing inks, preferably with an aqueous-organic vehicle, for the production of color filters by photolithography, offset printing or mechanical, piezo-mechanical or thermal ink-jet printing; in pigment and pigmented formulations; in photolacquers; and in color filters, especially color filters for liquid crystal displays (LCDs), and the production of color filters for LCDs (all claimed).

ADVANTAGE - These pigments give better color purity, transparency and light fastness than usual. They are readily dispersible in polar and apolar organic media, so that they can be stabilized in finely-divided form in various matrix systems or medium for making color filters. They have the required fastness and coloristic properties, especially color purity and transparency, when mixed with one another and other pigments.

Dwg.0/0

FILE SEGMENT: CPI EPI GMPI

FIELD AVAILABILITY: AB; GI; DCN

MANUAL CODES: CPI: A08-E04; A11-C02B; A12-B01; A12-L03B; A12-L03D;  
A12-W07D; E21-C13; E21-C17; G02-A04A; G05-F03;  
L03-G05B

EPI: U14-K01; W05-E

TECH UPTX: 20020416

TECHNOLOGY FOCUS - IMAGING AND COMMUNICATION - Preferred Process:

(claimed) Color filters for liquid crystal displays are produced by preparing a photolacquer by milling compound(s) (I) in an organic solvent, optionally with addition of a binder resin and dispersant, then adding photocurable monomer, photoinitiator and optionally more binder and solvent. The photolacquer is applied to a suitable substrate, generally glass plate, by a suitable coating process, e.g. roller, spray, spin, dip or air-knife coating, exposed through a photomask, hardened and developed to the finished color filter.

Preferred Products: (claimed) The products are color filters containing compound(s) (I); and liquid crystal displays with at least one of these filters.

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Components: Suitable intercalates include (a)cyclic organic compounds, especially melamine or a melamine derivative. The metal complexes are of formula (IIA):

Me = metals.

R, R', R<sub>1</sub>, R<sub>1'</sub> = OH;

They preferably have standard color fractions of x = 0.38-0.72 and y = 0.14-0.55. (I) especially are inclusion compounds, intercalation compounds and solid solutions of a nickel 1:1 complex of 2,2',5,5'-tetrahydroxy-azobarbituric acid (IIB) of formula (II) and 2,4,6-triamino-1,3,5-triazine compound(s) of formula (III):

R<sub>6</sub> = hydrogen (H) or 1-4 carbon (C) (hydroxy)alkyl.

The azo compound preferably is in the form of a mono- or di-K salt, tautomer or hydrates, especially the mono- or di-K salt of (IIB).

Preferred Formulations: Pigment formulations contain compound(s) (I) and organic compound(s) selected from terpenes, terpenoids and fatty acid esters. Other formulations contain (I) or the pigment formulation, organic solvent(s) and optionally a binder resin and dispersant. Preferred pigment formulations contain (a) a compound based on an azo compound of formula (II); (b) a 1:1 azo-metal complex of (II) or a tautomer; or (c) an inclusion compound, intercalation compound or solid solution of a nickel

1:1 complex of (IIB) and (III);

R1, R1' = OH

**TECHNOLOGY FOCUS - POLYMERS** - Preferred Components: Suitable intercalates include a polycondensate, preferably based on urea and formaldehyde and block **copolymers** based on (poly)stearic acid, (poly)ethylene oxide and (poly)propylene oxide.

Preferred Formulations: Pigment formulations contain homo- or **copolymers**, e.g. random or block **copolymers** with a water solubility less than 1, especially less than 0.1 g/l at 20 degreesC. Photolacquers contain photocurable monomer(s), photoinitiator(s) and compound(s) (I). Preferred pigment formulations contain 1-100, especially 0.5-60 wt.% compound(s) (I) based on (II) and surfactant(s) of formula (IV).

Z = H or X Cat;

R15 = H or 1-4C alkyl;

R16 = H or methyl (CH<sub>3</sub>);

R17 = H, 1-4C alkyl, 1-4C alkoxy, 1-4C alkoxy carbonyl or phenyl;

m = 1-4;

n = 6-120;

R18 = H, CH<sub>3</sub> and phenyl (Ph), with 0-60 wt.% CH<sub>3</sub> and 100-40 wt.% H or 0-40 wt.% Ph and 100-60 wt.% H;

X = -SO<sub>3</sub>, -SO<sub>2</sub>, -PO<sub>3</sub> or -CO-(R19)-COO;

Cat = H, Li, Na, K, NH<sub>4</sub> or HOCH<sub>2</sub>CH<sub>2</sub>-NH<sub>3</sub> cation or 2 cations if

X = -PO<sub>3</sub>;

R19 = a divalent aliphatic or aromatic group, preferably 1-4C alkylene, especially ethylene, a 2-4C group with one unsaturated bond, especially acetylene, or (substituted) phenylene, especially ortho-phenylene, which may have substituent(s), especially 1-4C alkyl, 1-4C alkoxy, 1-4C alkoxy carbonyl or phenyl.

ABEX

UPTX: 20020416

**SPECIFIC COMPOUNDS** - A specific example of the intercalated compound is melamine.

**EXAMPLE** - A mixture of 25 g benzenesulfonyl hydrazide, 200 ml. water, 20 ml 10 N hydrochloric acid and 1.25 g condensation product of stearic acid with taurine was stirred for 30 minutes. Diazotization (sodium nitrite, cold) and neutralization gave an emulsion of benzenesulfonyl azide. This was treated with 38.2 g barbituric acid and stirred for 10 minutes, then adjusted to pH 8, stirred at 50 degreesC for 2 hours, adjusted to pH 4.8 and stirred for 1 hour at 70 degreesC and 3 hours at 90 degreesC, giving a suspension of the sodium salt (V) of azobarbituric acid containing about 22 g benzenesulfonamide (by-product). This was heated to 95-100 degreesC, filtered and washed with boiling water. A solution of 34.5 g nickel chloride hexahydrate (NiCl<sub>2</sub>.6H<sub>2</sub>O) and 13 g anhydrous sodium acetate in 100 ml water was dripped in 5 minutes into a suspension of the (V) filter cake in 500 ml water at 80 degreesC. After stirring at 80 degreesC for 1 hour, 42 g melamine were added and the mixture was stirred for 1 hour at 80 degreesC and 2 hours at 95 degreesC, then filtered and washed with hot water. The wet filter cake contained 42.6 weight% solids. In an alkyd-melamine lacquer system, the dried and ground pigment had standard color fractions of x = 0.438 and y = 0.464 and a standard lightness Y of 58.38, determined to DIN 53238.

**DEFINITIONS** - Preferred Definitions:

R, R' = OH or NH<sub>3</sub>.

L84 ANSWER 99 OF 105 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

ACCESSION NUMBER: 2000-319925 [28] WPIX

CROSS REFERENCE: 2000-305503 [27]; 2000-305504 [27]

DOC. NO. CPI: C2000-097108

**TITLE:** Solid pigment formulation based on azopyrimidine metal complex inclusion compound, useful in printing ink, distemper, paint, for coloring polymer or fiber or printing textile or paper is alkaline in aqueous suspension.

**DERWENT CLASS:** A60 E21 F06

**INVENTOR(S):** HERRMANN, U; LINKE, F; SOMMER, R; STOLP, G

**PATENT ASSIGNEE(S):** (FARB) BAYER AG

**COUNTRY COUNT:** 25

**PATENT INFORMATION:**

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
<hr/>						
EP 994164	A1	20000419	(200028)*	GE	23	C09B067-00
R: AL AT BE	CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT					
RO SE SI						
EP 994164	B1	20020724	(200256)	GE		C09B067-00
R: CH DE ES	FR GB IT LI					
DE 59902101	G	20020829	(200264)			C09B067-00
ES 2180246	T3	20030201	(200322)			C09B067-00

**APPLICATION DETAILS:**

PATENT NO	KIND	APPLICATION	DATE
<hr/>			
EP 994164	A1	EP 1999-119101	19991004
EP 994164	B1	EP 1999-119101	19991004
DE 59902101	G	DE 1999-502101	19991004
		EP 1999-119101	19991004
ES 2180246	T3	EP 1999-119101	19991004

**FILING DETAILS:**

PATENT NO	KIND	PATENT NO
DE 59902101	G Based on	EP 994164
ES 2180246	T3 Based on	EP 994164

**PRIORITY APPLN. INFO:** DE 1998-19847586 19981015

**INT. PATENT CLASSIF.:**

MAIN: C09B067-00

SECONDARY: C09B067-10

ADDITIONAL: C08K005-3462; C09B045-14

**BASIC ABSTRACT:**

EP 994164 A UPAB: 20030402

NOVELTY - In solid pigment formulations containing metal complex(es) of an azopyrimidine compound, optionally with condensed ring system(s), as pigment, and included compound(s), the novelty is that a suspension of the formulation in 20 times the amount of water has pH over 6.5.

DETAILED DESCRIPTION - In solid pigment formulations containing metal complex(es) of an azopyrimidine compound of formula (I), optionally with condensed ring system(s) as pigment, and included compound(s), the novelty is that a suspension of the formulation in 20 times the amount of water has pH over 6.5.

X, Y = rings with 1 or 2 substituents selected from oxo (=O), thioxo (=S), imino (=NR7), amino (-NR6R7), -OR6, -SR6, -COOR6, cyano (-CN), -CONR6R7, -SO2R8, -N(CN)-R6, (cyclo)alkyl and ar(alk)yl, such that each ring has a total of 3 endo- and exocyclic double bonds;

R6 = hydrogen (H), (cyclo)alkyl or ar(alk)yl;

R7 = H, CN, (cyclo)alkyl, ar(alk)yl or acyl;

R8 = (cyclo)alkyl or ar(alk)yl;  
 R1, R2, R3, R4 = H, (cyclo)alkyl or ar(alk)yl or condensed 5- or  
 6-membered rings;  
 R5 = -OH, -NR6R7, (cyclo)alkyl or ar(alk)yl;  
 m, n, o, p = 1 or also 0 if there are double bonds from the ring N  
 atoms;

R1-8 may = groups with substituted CH groups

An INDEPENDENT CLAIM is also included for the production of the  
 pigment formulation.

USE - The pigment formulations are used for making printing inks,  
 distempers or binder paints, for bulk coloration of (semi)synthetic or  
 natural macromolecular substances, especially polyvinyl chloride,  
 polystyrene, polyamide, polyethylene or polypropylene, for spin dyeing  
 natural, regenerated or synthetic fibers, e.g. cellulose, polyester,  
 polycarbonate, polyacrylonitrile or polyamide fibers and for printing  
 textiles and paper (all claimed).

ADVANTAGE - Inclusion compounds, intercalation compounds and solid  
 solutions of the metal complexes produced by existing methods have very  
 hard grains and are difficult to disperse. The present formulations have  
 much softer grains and very much better dispersibility. They give  
 relatively strong and more brilliant colors in pigmented substrates.

Dwg.0/0

FILE SEGMENT: CPI

FIELD AVAILABILITY: AB; GI; DCN

MANUAL CODES: CPI: A08-E04; E21-C13; E21-C17; F03-F03; F03-F05;  
 F03-F06; F03-F07; F03-F09; F03-F17; F03-F30;  
 F05-A06D

TECH UPTX: 20000613

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Components: The metal  
 complex comprises mono-, di-, tri- and tetraanions of (I) with lithium,  
 cesium, magnesium, cadmium, cobalt, aluminum, chromium, tin, lead, sodium,  
 potassium, calcium, strontium, barium, zinc, iron, copper, manganese or  
 especially nickel. The included compound is an (a)cyclic organic compound,  
 especially melamine.

Preferred Composition: The aqueous suspension has pH 7-9.

Preferred Production: (claimed) The formulation is produced by from (a) a  
 metal complex and included compound(s) giving an aqueous suspension with  
 pH at most 6.5, preferably 2-5, by (b) adjusting to pH over 6.5 with an  
 inorganic and/or organic base and optionally adding other additives and  
 (c) drying.

ABEX UPTX: 20000613

SPECIFIC COMPOUNDS - A specific example of the azo compound is  
 azobarbituric acid. A specific example of the included compound is  
 melamine.

EXAMPLE - 0.105 mole 24% aqueous solution of nickel chloride hexahydrate  
 were dripped into a homogeneous suspension of 0.1 mole water-wet paste of  
 the sodium salt of azobarbituric acid in 500 ml distilled water at  
 95degreesC. The mixture was stirred for 30 minutes to form the lake, then  
 0.2 mole melamine were added and the mixture was stirred until the  
 intercalation reaction was complete. The mixture was adjusted to pH 5 with  
 aqueous sodium hydroxide solution, then the produced was filtered and  
 washed to remove electrolyte, giving a wet paste containing 43% solids. In  
 a control, this paste was dried in vacuo at 80degreesC and milled, giving  
 a product (A) with pH at most 6.5 in aqueous suspension. A suspension of  
 186 g wet paste of the melamine intercalation compound of  
 azobarbituric acid nickel complex in 814 ml water was  
 heated to 80degreesC, adjusted to pH 7.0-7.5 with about 1.3 g  
 N,N-dimethylethanamine and stirred at this pH and 80degreesC for 2  
 hours. It was then filtered, dried in vacuo at 80degreesC and milled. The

product (B) had pH over 7 in aqueous suspension. (B) was dispersed in a white alkyd/melamine resin lacquer systems. After a dispersion time of 1 hour, the color strength was 3.7% higher than that obtained from (A) after 2.5 hours.

**DEFINITIONS - Preferred Definitions:**

X = a ring of formula (IIA-E);

L, M = =O, =S or =NR6;

L1 = H, -OR6, -SR6, -NR6R7, -COOR6, -CONR6R7, CN, (cyclo)alkyl or ar(alk)y1;

M1 = -OR6, -SR6, -NR6R7, -COOR6, -CONR6R7, -CN, -SO2R8, -N(CN)-R6, (cyclo)alkyl or ar(alk)y1;

M1 and R1 or M1 and R2 may = a 5- or 6-membered ring

In particular,

X = (a) (IIC) or (b) (IID) with

R5 = -OH or -NH2; and

Y = (a) (IIC) or (b) (IID) with

R5 = OH;

R1, R2 = H;

L = =O;

M1 = H, -OH, -NH2, -NHCN, arylamino or acylamino

L84 ANSWER 100 OF 105 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

ACCESSION NUMBER: 2000-305503 [27] WPIX

CROSS REFERENCE: 2000-305504 [27]; 2000-319925 [28]

DOC. NO. CPI: C2000-092901

TITLE: Azo pyrimidine metal complex inclusion compounds, useful in printing ink, distemper, paint, for coloring polymer or fiber or printing textile or paper is alkaline in aqueous suspension, have low dispersion hardness.

DERWENT CLASS: A60 E21 F01 F06 G02

INVENTOR(S): HERRMANN, U; LINKE, F; SOMMER, R; STOLP, G; FAUBION, K; GOBEL, R; PFUTZENREUTER, D; GOEBEL, R; PFUETZENREUTER, D; GBEL, R

PATENT ASSIGNEE(S): (FARB) BAYER AG; (FARB) BAYER CHEM AG

COUNTRY COUNT: 33

PATENT INFORMATION:

PATENT NO	KIND DATE	WEEK	LA	PG MAIN IPC
<hr/>				
EP 994162	A1 20000419 (200027)*	GE	19	C09B045-14<--
R: AL AT BE	CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT			
RO SE SI				
DE 19847586	A1 20000420 (200027)			C09B067-20
CZ 9903646	A3 20000517 (200031)			C09B067-20
CZ 9903647	A3 20000517 (200031)			C09B045-00<--
JP 2000119544	A 20000425 (200031)		15	C09B045-22<--
JP 2000129152	A 20000509 (200032)		14	C09B045-14<--
CN 1251375	A 20000426 (200036)			C09B045-00<--
CN 1251377	A 20000426 (200036)			C09B045-22<--
CA 2285800	A1 20000415 (200037)	EN		C09B045-14<--
CA 2285827	A1 20000415 (200037)	EN		C09B045-14<--
DE 19924764	A1 20001130 (200064)			C09B045-22<--
KR 2000029055	A 20000525 (200110)			C09B062-255
KR 2000029056	A 20000525 (200110)			C09B045-14<--
US 6211346	B1 20010403 (200120)			C09B029-036
US 6261358	B1 20010717 (200142)			C09B067-00
MX 9909293	A1 20001001 (200158)			C09B067-36
MX 9909294	A1 20001001 (200158)			C09B067-36

MX 9909295	A1	20001001 (200158)	C09B067-36
US 6350307	B1	20020226 (200220)	C09B045-14<--
TW 482813	A	20020411 (200313)	C09B067-00
ES 2191393	T3	20030901 (200365)	C09B045-14<--
EP 994162	B1	20040114 (200406) GE	C09B045-14<--
R: CH DE ES FR GB IT LI			
DE 59908291	G	20040219 (200414)	C09B045-14<--
ES 2214785	T3	20040916 (200462)	C09B045-14<--

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 994162	A1	EP 1999-119099	19991004
DE 19847586	A1	DE 1998-1047586	19981015
CZ 9903646	A3	CZ 1999-3646	19991014
CZ 9903647	A3	CZ 1999-3647	19991014
JP 2000119544	A	JP 1999-292424	19991014
JP 2000129152	A	JP 1999-292434	19991014
CN 1251375	A	CN 1999-121383	19991015
CN 1251377	A	CN 1999-121382	19991015
CA 2285800	A1	CA 1999-2285800	19991012
CA 2285827	A1	CA 1999-2285827	19991012
DE 19924764	A1	DE 1999-1024764	19990529
KR 2000029055	A	KR 1999-44450	19991014
KR 2000029056	A	KR 1999-44451	19991014
US 6211346	B1	US 1999-415339	19991008
US 6261358	B1	US 1999-415171	19991008
MX 9909293	A1	MX 1999-9293	19991011
MX 9909294	A1	MX 1999-9294	19991011
MX 9909295	A1	MX 1999-9295	19991011
US 6350307	B1	US 1999-415342	19991008
TW 482813	A	TW 1999-117740	19991014
ES 2191393	T3	EP 1999-119100	19991004
EP 994162	B1	EP 1999-119099	19991004
DE 59908291	G	DE 1999-508291	19991004
		EP 1999-119099	19991004
ES 2214785	T3	EP 1999-119099	19991004

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
ES 2191393	T3 Based on	EP 994163
DE 59908291	G Based on	EP 994162
ES 2214785	T3 Based on	EP 994162

PRIORITY APPLN. INFO: DE 1999-19924764 19990529; DE  
                           1998-19847586 19981015; DE  
                           1999-19924763 19990529

## INT. PATENT CLASSIF.:

MAIN: C09B029-036; C09B045-00; C09B045-14;  
        C09B045-22; C09B062-255; C09B067-00; C09B067-20

SECONDARY: C07F019-00; C08J003-20; C08K005-3462; C08K005-36;  
           C09B063-00; C09B067-10; C09D011-02; C09D017-00;  
           D01F001-04; D06P001-00; D06P001-10; D06P001-44;  
           D06P003-52; D06P005-00; D06P005-17; D21H017-67

ADDITIONAL: C09B067-22; C09B067-36

## BASIC ABSTRACT:

EP 994162 A UPAB: 20040928

NOVELTY - Metal complex(es) of an azo pyrimidine compound, optionally with condensed ring system(s), as pigment, and included compound(s) have a dispersion hardness less than 250.

DETAILED DESCRIPTION - Metal complex(es) of an azo pyrimidine compound of formula (I), optionally with condensed ring system(s) as pigment, and included compound(s) have a dispersion hardness less than 250;

X, Y = rings with 1 or 2 substituents selected from oxo (=O), thioxo (=S), imino (=NR<sub>7</sub>), amino (-NR<sub>6</sub>R<sub>7</sub>), -OR<sub>6</sub>, -SR<sub>6</sub>, -COOR<sub>6</sub>, cyano (-CN), -CONR<sub>6</sub>R<sub>7</sub>, -SO<sub>2</sub>R<sub>8</sub>, -N(CN)-R<sub>6</sub>, (cyclo)alkyl and ar(alk)yl, such that each ring has a total of 3 endo- and exocyclic double bonds;

R<sub>6</sub> = hydrogen (H), (cyclo)alkyl or ar(alk)yl;

R<sub>7</sub> = H, CN, (cyclo)alkyl, ar(alk)yl or acyl;

R<sub>8</sub> = (cyclo)alkyl or ar(alk)yl;

R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> = H, (cyclo)alkyl or ar(alk)yl or condensed 5- or 6-membered rings;

R<sub>5</sub> = -OH, -NR<sub>6</sub>R<sub>7</sub>, (cyclo)alkyl or ar(alk)yl;

m, n, o, p = 1 or also 0 if there are double bonds from the ring N atoms;

R<sub>1</sub>-8 may = groups with substituted CH groups.

An INDEPENDENT CLAIM is also included for the preparation of the complexes.

USE - The compounds are used with a dispersant in pigment formulations and for making printing inks, distempers or binder paints, for bulk coloration of (semi)synthetic or natural macromolecular substances, especially polyvinyl chloride, polystyrene, polyamide, polyethylene or polypropylene, for spin dyeing natural, regenerated or synthetic fibers, e.g. cellulose, polyester, polycarbonate, polyacrylonitrile or polyamide fibers and for printing textiles and paper (all claimed). The solid pigment formulations are suitable for all pigment applications.

ADVANTAGE - Inclusion compounds, intercalation compounds and solid solutions of the metal complexes produced by existing methods have very hard grains and are difficult to disperse. The present new pigment forms have much softer grains and very much better dispersibility. They give stronger and more brilliant colors in pigmented substrates.

Dwg.0/0

FILE SEGMENT: CPI

FIELD AVAILABILITY: AB; GI; DCN

MANUAL CODES: CPI: A08-E04; E21-C13; E21-C17; F03-F03; F03-F05;  
F03-F06B; F03-F07B; F03-F09; F03-F17; F03-F30;  
G02-A03A; G02-A04B

TECH UPTX: 20000606

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Components: The metal complex comprises mono-, di-, tri- and tetraanions of (I) with lithium, cesium, magnesium, cadmium, cobalt, aluminum, chromium, tin, lead or preferably sodium, potassium, calcium, strontium, barium, zinc, iron, copper, manganese or especially nickel. The included compound is an (a)cyclic organic compound, especially melamine. The metal complexes have a BET specific surface area less than 150 m<sup>2</sup>/g.

Preparation: (claimed) The complex inclusion compounds are prepared by tempering compounds with a dispersion hardness greater than 250 in the presence of water and optionally organic solvent either at pH 1-4, preferably 1-3, especially 1.5-2.5 or at pH 9-13, preferably 10-11 and at 80-180, preferably 90-140, especially 95-100 degreesC.

ABEX UPTX: 20000606

SPECIFIC COMPOUNDS - A specific example of the azo compound is azobarbituric acid. A specific example of the included compound is melamine.

EXAMPLE - A homogeneous suspension of 425 g water-wet paste of the sodium

salt of azobarbituric acid (40% solids = 170 g) in 5,000 ml distilled water was treated with 122.4 g nickel chloride hexahydrate and 126.1 g melamine, then heated and stirred at 95 degreesC for 2 hours. After adjusting to pH 5.0 with sodium acetate, the solid was filtered, washed to remove electrolyte, dried in vacuo and milled. The resultant pigment powder (A) had a surface area of 160 m<sup>2</sup>/g and dispersion hardness greater than 250. A stirred homogeneous suspension of 657 g wet paste of this melamine intercalation compound of **azobarbituric acid nickel complex** (45% solids = 295.6 g) in 5,000 ml water was acidified with hydrochloric acid and tempered for 2 hours at 100 degreesC and pH 2. After cooling to 95 degreesC, it was adjusted to pH 5.0 with aqueous sodium hydroxide solution. It was then filtered, dried in vacuo at 80 degreesC and milled. The product (B) had a BET specific surface area of 88 m<sup>2</sup>/g and dispersion hardness less than 250 (DIN 53775, part 7).

**DEFINITIONS - Preferred Definitions:**

X = a ring of formula (IIA-E);

L, M = =O, =S or =NR6;

L1 = H, -OR6, -SR6, -NR6R7, -COOR6, -CONR6R7, CN, (cyclo)alkyl or ar(alk)yl;

M1 = -OR6, -SR6, -NR6R7, -COOR6, -CONR6R7, -CN, -SO2R8, -N(CN)-R6, (cyclo)alkyl or ar(alk)yl;

M1 and R1 or M1 and R2 may = a 5- or 6-membered ring.

In particular,

X = (a) (IIC) or (b) (IID) with

R5 = -OH or -NH2; and

Y = (a) (IIC) or (b) (IID) with

R5 = OH;

R1, R2 = H;

L = =O;

M1 = H, -OH, -NH2, -NHCN, arylamino or acylamino.

L84 ANSWER 101 OF 105 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

ACCESSION NUMBER: 2001-123996 [14] WPIX

DOC. NO. NON-CPI: N2001-091086

DOC. NO. CPI: C2001-036180

TITLE: Solid formulation, e.g. for pigmenting paint, coating, paper, building material, polymer, printing ink or ink-jet ink, contains water-dispersible graft polymer of unsaturated hydrophobic monomer on (modified) natural protective colloid.

DERWENT CLASS: A18 A25 A60 A82 A97 E21 E23 F06 F09 G02 T04

INVENTOR(S): GIESECKE, H; HAUSCHEL, B; NYSSEN, P; PFUETZENREUTER, D

PATENT ASSIGNEE(S): (FARB) BAYER AG

COUNTRY COUNT: 3

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
DE 10022371	A1	20001123	(200114)*		24	C09D011-10
GB 2351087	A	20001220	(200114)			C09D011-00
US 6489382	B1	20021203	(200301)			C08K005-34

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 10022371	A1	DE 2000-10022371	20000508
GB 2351087	A	GB 2000-11703	20000515
US 6489382	B1	US 2000-571054	20000515

PRIORITY APPLN. INFO: DE 1999-19923073 19990520

INT. PATENT CLASSIF.:

MAIN: C08K005-34; C09D011-00; C09D011-10  
 SECONDARY: C08J007-04; C08K005-06; C08K005-42; C08K013-02;  
 C08L051-06; C09B045-04; C09D005-02; C09D017-00

BASIC ABSTRACT:

DE 10022371 A UPAB: 20010312

NOVELTY - Solid formulations contain:

(a) particulate solid(s); and  
 (b) water-dispersible graft **copolymer** of ethylenically unsaturated, hydrophobic monomer(s) and optionally hydrophilic monomer(s) on a natural protective colloid (IA) or a protective colloid (IB), obtained from (IA) by conversion to a derivative or thermal, enzymatic, oxidative, hydrolytic or bacteriological degradation, with number average molecular weight, Mn, over 500 g/mole.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for the production of the formulation by mixing components (a) and (b) in water and optionally separating the mixture of (a) and (b).

USE - The formulations are used for pigmenting natural or synthetic materials, especially water-based and other paints, coating compositions for fabrics and paper, paper in bulk, building materials, natural and synthetic **polymers** and printing inks, especially ink-jet inks (all claimed).

ADVANTAGE - The formulations are excellent for dispersion and pigmentation of numerous aqueous and non-aqueous media, especially hydrophobic media. They are more stable than the pure solids in apolar organic media or, optionally with added dispersant, in polar organic and aqueous media.

Dwg.0/0

FILE SEGMENT: CPI EPI

FIELD AVAILABILITY: AB; DCN

MANUAL CODES: CPI: A08-M01A; A12-W12; E21-B04; E21-C13; E21-C17;  
 E25-E01; F05-A06C; F05-A06D; G01-B03; G02-A03;  
 G02-A04A; G05-F03

EPI: T04-G02C

TECH UPTX: 20010312

TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Preferred Solids: The particulate solids include inorganic pigments, carbon black, metal pigments and filler pigments.

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Solids: The particulate solids include organic pigments, filler pigments, water-insoluble or hardly soluble dyes and optical brighteners.

Preferred Pigments: Especially suitable organic colored pigments are 1,3-bisbarbitur-5-ylidene-isoindolines of formula (I), 1-cyanomethylene-3-barbitur-5-ylidene-isoindolines of formula (II) and azo-bis-barbituric acid compounds of formula (III) and the corresponding mono- or di-iminobarbituryl compounds (tautomeric) and their salts, complexes, inclusion compounds, solid solutions and intercalation compounds.

R1, R2, R3, R4 = hydrogen (H), alkyl, especially 1-6 carbon (C) alkyl, cycloalkyl, especially 5-8 C cycloalkyl, aryl, especially optionally substituted phenyl, aralkyl, especially 6-10 C aryl-(1-4 C)-alkyl, e.g. benzyl or ethylphenyl, or hetaryl;

A = cyanomethylene group of formula =C(R9)CN (IV);

B = isoindoline group of formula (V) with the 1- and 3-positions linked to the double bonds;

R5, R6, R7, R8 = H, halogen, especially fluorine (F), chlorine (Cl) and bromine (Br), 1-6 C alkyl, 1-4 C alkoxy or 6-10 C aryloxy;

R9 = electron acceptor group;

Z1-Z10 = oxygen (O) or imino (NR10);

R10 = H or cyano (CN).

**Nickel complexes of 5-(2-cyanoimino-barbitur-5-yl)-azo**  
**-barbituric acid or azobarbituric acid of formulae (IIIA) and (IIIB) are**  
**especially suitable.**

Pigment (III) may be in the form of an inclusion or intercalation compound, in which the included compound is an (a)cyclic compound, preferably a carbonamide, sulfonamide, (substituted) urea or heterocycle, especially 2,4,6-triamino-1,3,5-triazine, acetoguanamine or benzoguanamine.

**Preferred Composition:** The formulation contains 10-99.9, preferably 40-99 wt.% particulate solid(s) and 0.1-90, preferably 1-60 wt.% graft polymer. It may also contain dispersant(s) and optionally water and/or an organic medium, in which case, it preferably contains 0.1-99 wt.% solid formulation containing (a) and (b), (c) 0.1-100 wt.% dispersant(s) with respect to (a) and (b) and (d) 0-99 wt.% water and/or organic medium.

**Preferred Dispersants:** Suitable dispersants include phosph(on)ates of formulae (VIA)-(VIC).

R4, R5, R6 = 1-20 C organyl;

R7 = 11-22 C (cyclo)alkyl, 7-18 C aralkyl, -R9-O-CO-R10 or -R9-COO-R10, especially a group derivative from a 4-7 C di- or tricarboxylic acid or derivative, e.g. ester, e.g. from butan-1,2,4-tricarboxylic acid, ethandicarboxylic acid or their derivatives;

R9 = (substituted) 2-4 C alkylene;

R10 = 6-22 C alkyl, cycloalkyl or alkylene;

R = H or methyl;

X<sup>+</sup> = H or a monovalent cation.

**TECHNOLOGY FOCUS - POLYMERS - Preferred Dispersants:** Suitable dispersants include:

(i) optionally ionically-modified phenol-styrene-polyglycol ethers;

(ii) condensation products based especially on:

(a) naphthalene-, phenol-, dihydroxybenzene- and benzene-sulfonic acids; sulfonated ditolyl ether, diphenylmethane, biphenyl, hydroxybiphenyl (especially 2-hydroxybiphenyl) or terphenyl; or sulfomethylated 4,4'-dihydroxydiphenyl sulfone;

(b) formaldehyde; and

(c) phenol, cresol, 4,4'-dihydroxydiphenyl sulfone, dihydroxydiphenyl methane, urea, dimethylolurea, melamine and guanidine; in which the condensation products have an inorganic salt content less than 10, preferably less than 5, especially less than 1 wt.%; an average degree of condensation of 1-150, preferably 1-20, especially 1-5; and a residual monomer content less than 30, preferably less than 10, especially less than 5 wt.%;

(iii) oxalkylation products obtained by condensation of aromatics containing phenolic hydroxyl groups with formamide and NH-functional groups, preferably oxalkylation products of aminomethylphenols of formula (VII), which preferably is oxalkylated with propylene oxide, butylene oxide, styrene oxide, glycidol or especially ethylene oxide and optionally propylene oxide;

(iv) a water-soluble polyisocyanate adduct with hydrophilic polyether chains, preferably containing not more than 1.0 wt.% isocyanate groups, 30-99.5 wt.% ethylene oxide units in polyether chains linked by monofunctional alcohol and ionic groups in a concentration of 0-200 miliequivalents/100 g; and

(v) polymeric dispersants selected from homo-, co- and graft (co)polymers and linear and random block copolymers with a molecular weight of 1000-100000, preferably 2000-40000, especially

5000-30000 g/mole.

R1 = monovalent, (substituted) (cyclo)aliphatic or aromatic hydrocarbyl;  
 R2 = H or as R1;  
 R3 = H, 1-20 C alkyl, 5-7 C cyclolalkyl, phenyl, benzyl, halogen, hydroxy,  
 1-18 C alkoxy, carboxy or 1-18 C alkoxy carbonyl.

ABEX UPTX: 20010312

EXAMPLE - 6.4 g oxidatively degraded starch (Perfectamyl A 4692(TM)) were added to 1500 g 4.8% aqueous suspension of the nickel complex of azobarbituric acid of formula (IIIB) (prepared as described in EP-A-839879) at room temperature, with stirring at 250 rpm, and dissolved by heating to 86 degreesC; The starch was degraded further by adding 1.5 g 1% iron(II) sulfate solution and 4.2 g hydrogen peroxide (H2O2) (3% aqueous solution) and stirring at 86 degreesC for 15 minutes. Then separate streams of 9.8 g styrene, 4.9 g n-butyl acrylate, 4.9 g tert.-butyl acrylate and 5.7 g 3% H2O2 solution were added continuously in 60 minutes and the mixture was stirring at 86 degreesC was continued for 15 minutes. After cooling to room temperature, 1.0 g 10% aqueous solution of tetrasodium ethylenediaminetetraacetate (Trilon B solution(TM)) were stirred into the suspension and the pH was adjusted to 5 with glacial acetic acid. The suspension was filtered on a vacuum filter and the filter cake was dried (72 hours in vacuo at 50 degreesC). 94 g pigment formulation containing 70 g pigment (IIIB) and 24 g graft copolymer were obtained.

L84 ANSWER 102 OF 105 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

ACCESSION NUMBER: 1986-145800 [23] WPIX

DOC. NO. CPI: C1986-062340

TITLE: New 1 1 metal complex cpds. of benzoic acid azo hydroxy pyrazole cpds. - with divalent transition metal, preparation and use for colouring polymer, especially fibre.

DERWENT CLASS: A60 E21 F01 G02

INVENTOR(S): LIENHARD, P

PATENT ASSIGNEE(S): (CIBA) CIBA GEIGY AG

COUNTRY COUNT: 14

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
<hr/>						
EP 183651	A	19860604	(198623)*	GE	21	
	R: BE CH DE FR GB IT LI NL					
AU 8550587	A	19860605	(198630)			
JP 61133271	A	19860620	(198631)			
BR 8505977	A	19860819	(198640)			
CA 1249265	A	19890124	(198911)			
CS 8508584	A	19890411	(198920)			
US 4847365	A	19890711	(198935)			
EP 183651	B	19900523	(199021)			
	R: BE CH DE FR GB IT LI NL					
DE 3577869	G	19900628	(199027)			

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
<hr/>			
EP 183651	A	EP 1985-810560	19851125
JP 61133271	A	JP 1985-266631	19851128
US 4847365	A	US 1988-159504	19880217

PRIORITY APPLN. INFO: CH 1984-5711 19841130  
 REFERENCE PATENTS: 2.Jnl.Ref; A3...8747; DE 917632; No-SR.Pub; US 2921061  
 INT. PATENT CLASSIF.: C08K005-23; C09B045-14; C09B063-00; C09D017-00;  
 D06P001-10; D06P003-00

## BASIC ABSTRACT:

EP 183651 A UPAB: 19930922

New 1:1 metal complexes (I) are derived from a divalent transition metal (II) and a subst. benzoic acid (2-azo-4) 5-hydroxy-3-substd.-pyrazole of general formula (III) where X = H, halogen, alkyl, alkoxy, aryloxy, NO<sub>2</sub>, acylamino, ureido, arylureido, thioureido, CNS, sulphamoyl or (halo)phthalimido; Y = H, halogen, alkyl or alkoxy; or X+Y+2 adjacent C atoms = an annellated benzene or imidazolone ring; R = alkyl, alkoxycarbonyl, carbamoyl or alkylcarbamoyl.

Specifically claimed is when (I) is a Ni, Cu, Co(II) and/or Zn complex; X = H, halogen, 1-4C alkyl, 1-4C alkoxy, NO<sub>2</sub>, 2-6C alkanoylamino, opt. Cl-, 1-4C alkyl- or 1-4C alkoxy-substd. phenoxy, benzoylamino or phenylureido or a ureido gp.; especially H, Cl, Me, NO<sub>2</sub>, 2-5C alkanoylamino, opt. Cl-, 1-4C alkyl or 1-4C alkoxy-substd. phenoxy or phenylcarbamoyl; partic. H, Cl in the p-position to the COOH gp. or phenoxy in the p-position to the azo gp.; Y = H, Cl, 1-4C alkyl or 1-4C alkoxy; especially H

or

Cl; partic. H; R = 1-4C alkyl, carbamoyl, 2-6C alkylcarbamoyl or 2-6C alkoxycarbonyl; especially Me or 2-3C alkoxycarbonyl; partic. Me.

USE/ADVANTAGE - (I) are claimed for colouring high-mol. organic materials, pref. synthetic fibres, especially bulk colouring of polyolefin, polyamide or polyester fibres. They can stabilise the polymers against the action of light and weather, which is especially important for fibres, especially polypropylene. (I) are also useful in plastics, lacquers and inks and have good dispersibility and fastness to over-lacquering, migration, heat, light, weather, wet and abrasion and good strength of colour and good gloss.

0/0

FILE SEGMENT: CPI

FIELD AVAILABILITY: AB

MANUAL CODES: CPI: A08-A01; A08-E04; E21-B01; E21-B04; F01-D03;  
F01-D04; F01-D05; F03-F02B; F03-F06B; F03-F07B;  
F03-F08; F03-F16B; F03-F17; F03-F25; F03-F30;  
G02-A03A; G02-A04B

ABEQ EP 183651 B UPAB: 19930922

A 1:1 metal complex of divalent nickel, copper, cobalt and/or zinc and an azo compound of the formula (I) in which X is a hydrogen or chlorine atom, a methyl, nitro, 2-5C alkanoylamino group, or a phenoxy or benzylamino group, each unsubstituted or substituted by chlorine atoms or by 1-4C alkyl or 1-4C alkoxy groups, and Y is a hydrogen or chlorine, and R is a methyl group or a 2-3C alkoxycarbonyl group.

sing

ABEQ US 4847365 A UPAB: 19930922

1:1 Ni, Cu, Co (II) and/or Zn complexes of an azo cpd. of formula (I) are new. X is H, Cl, CH<sub>3</sub>, NO<sub>2</sub>, 2-6C alkanoylamino, phenoxy or phenylcarbamoyl. Pref. X is H, Cl which is para to the carboxyl gp. or phenoxy which is para to the azo gp.

USE/ADVANTAGE - These metal complexes are used for the mass colouration of polymer fibres, esp. polyolefins, polyamides or polyesters. The coloured fibres have good fastness to heat, light and weather, as well as good rub- and wet-fastness.

L84 ANSWER 103 OF 105 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

ACCESSION NUMBER: 1983-30008K [13] WPIX

DOC. NO. CPI: C1983-029328

TITLE: Azo barbituric acid derivs. useful as pigments - for

paints, polymers, textile printing etc..  
 DERTWENT CLASS: A60 E23 F06 G02  
 INVENTOR(S): LORENZ, M  
 PATENT ASSIGNEE(S): (FARB) BAYER AG  
 COUNTRY COUNT: 7  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
<hr/>						
EP 74515	A	19830323	(198313)*	GE	57	
R: CH DE FR GB	LI					
JP 58052358	A	19830328	(198318)			
EP 74515	B	19860820	(198634)	GE		
R: CH DE FR GB	LI					
DE 3272726	G	19860925	(198640)			
US 4628082	A	19861209	(198652)			

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
<hr/>			
EP 74515	A	EP 1982-107660	19820821
US 4628082	A	US 1985-734364	19850514

PRIORITY APPLN. INFO: DE 1981-3134725 19810902; DE  
 1982-3215875 19820429

REFERENCE PATENTS: FR 2121048

INT. PATENT CLASSIF.: C07D239-46; C09B027-00; C09B029-52; C09B045-00;  
 C09B063-00; C09B067-20

## BASIC ABSTRACT:

EP 74515 A UPAB: 19930925  
 Barbituric acid derivs. of formula (I) their tautomers, salts and complexes are new. The rings X and Y each have 1 or 2 oxo, thioxo, :NR7, -NR7R7, OR6, SR6, COOR6, CN, CONR6R7, SO2R8, -N(R6)CN, (cyclo)alkyl, aryl or aralkyl substituents., the total of endo- and exo-cyclic double bonds being 3 for each ring; R6 is H, (cyclo)alkyl, aryl or aralkyl; R7 is H, (cyclo)alkyl, cyano, aryl, aralkyl, or acyl; R8 is (cyclo)alkyl, aryl or aralkyl.

R1-R4 are H, (cyclo)alkyl, aryl or aralkyl or (dotted lines) can form 5- or 6-membered rings which may be fused to additional rings; R5 is hydroxy, NR6R7, (cyclo)alkyl, aryl or aralkyl, and all groups. R1-R8 can be subst. themselves, , n, o and p are 1 or zero when the appropriate ring N is double-bonded. Excluded are: azobarbituric acids ( and salts and complexes); azouracil (and alkali salts) and uracil-5-azobarbituric acids (and alkali salts). Also new are solid solns., inclusion cpds. and intercalation cpds of (I).

(I) are useful as pigments e.g. in printing inks, distempers and paints; for mass-colouring PVC, polyolefins, etc.; for spin-colouring of celluloseics, polyesters etc. and for printing textiles or paper. They have high colour strength and covering power; Very good light fastness and excellent solvent fastness and temp. stability.

FILE SEGMENT: CPI

FIELD AVAILABILITY: AB

MANUAL CODES: CPI: A08-E03A2; A08-E04; E21-C13; E21-C17; F01-D; F03-F16B; F03-G; F05-A06D; G02-A03A; G02-A04B

ABEQ EP 74515 B UPAB: 19930925

Barbituric acid derivs. of formula (I) their tautomers, salts and complexes are new. The rings X and Y each have 1 or 2 oxo, thioxo, :NR7, -NR7R7, OR6, SR6, COOR6, CN, CONR6R7, SO2R8, -N(R6)CN, (cyclo)alkyl, aryl

or aralkyl substs., the total of endo- and exo-cyclic double bonds being 3 for each ring; R6 is H, (cyclo)alkyl, aryl or aralkyl; R7 is H, (cyclo)alkyl, cyano, aryl, aralkyl, or acyl; R8 is (cyclo)alkyl, aryl or aralkyl.

R1-R4 are H, (cyclo)alkyl, aryl or aralkyl or (dotted lines) can form 5- or 6-membered rings which may be fused to additional rings; R5 is hydroxy, NR6R7, (cyclo)alkyl, aryl or aralkyl, and all gpts. R1-R8 can be substd. themselves, n, o and p are 1 or zero when the appropriate ring N is double-bonded. Excluded are: azobarbituric acids (and salts and complexes); azouracil (and alkali salts) and uracil-5-azobarbituric acids (and alkali salts). Also new are solid solns., inclusion cpds. and intercalation cpds. of (I).

(I) are useful as pigments e.g. in printing inks, distempers and paints; for mass-colouring PVC, polyolefins, etc.; for spin-colouring of celluloses, polyesters etc. and for printing textiles or paper. They have high colour strength and covering power; Very good light fastness and excellent solvent fastness and temp. stability.

ABEQ US 4628082 A UPAB: 19930925

Azobarbituric acid derivs. and their salts and complexes are new. In free acid form the cpds. have formula (I) in one tautomeric structure. In the formula, L and L1 are O or NR7 but both are not NR7. One of M and M1 is O and the other is O, NR7, CN or NR6-CN. R6 is H, alkyl, cycloalkyl, aryl or aralkyl. R7 is H, CN, alkyl, cycloalkyl, aralkyl, (1-6C alkyl) carbonyl, phenyl carbonyl, 1-6C alkylsulphonyl, phenylsulphonyl, carbamoyl opt. substd. by 1-6C alkyl, phenyl or naphthyl, or sulphamoyl opt. substd. by 1-6C alkyl, phenyl or naphthyl; the alkyl gpts. are opt. substd. by halo, OH, CN, NH2 or 1-6C alkoxy and the phenyl and naphthyl gpts. are opt. substd. by halo, OH, 1-6C alkyl, 1-6C alkoxy, NH2, NO2 or CN. R1-4 are H, alkyl, cycloalkyl, aryl or aralkyl.

Salts and complexes contain Li, Cr, Mg, Cd, Co, Al, Cr, Sn, Na, K, Ca, Sr, Ba, Zn, Fe, Ni, Cu, Mn or Pb. Azobarbituric acid and its salts and complexes are excluded.

USE - The cpds. are pigments. They can form resins and can form inclusion or intercalation cpds. with dyestuffs to provide higher tinctorial strengths or different hues. Used in printing inks, paints, etc. (

L84 ANSWER 104 OF 105 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

ACCESSION NUMBER: 1983-25495K [11] WPIX

DOC. NO. CPI: C1983-024945

TITLE: Occlusion cpds., intercalation cpds. and solid solns. as pigments - comprising coloured organo metallic cpd. with planar crystal lattice incorporating at least one other cpd..

DERWENT CLASS: A60 E24 G01

INVENTOR(S): LORENZ, M; SCHUNDEHUT, K H

PATENT ASSIGNEE(S): (FARB) BAYER AG

COUNTRY COUNT: 7

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
<hr/>							
EP 73463	A	19830309	(198311)*	GE	61		
	R: CH DE FR GB LI						
DE 3215875	A	19830317	(198312)				
DE 3215876	A	19830317	(198312)				
JP 58052361	A	19830328	(198318)				
EP 73463	B	19851023	(198543)	GE			
	R: CH DE FR GB LI						
DE 3267042	G	19851128	(198549)				

US 4622391 A 19861111 (198648)  
 JP 02062590 B 19901226 (199104)

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 73463	A	EP 1982-107774	19820825
US 4622391	A	US 1985-734377	19850515
JP 02062590	B	JP 1982-151865	19820902

PRIORITY APPLN. INFO: DE 1981-3134725 19810902; DE  
 1982-3215876 19820429

REFERENCE PATENTS: 1.Jnl.Ref; DE 1619622; FR 2121048; JP 50064320  
 INT. PATENT CLASSIF.: C06P001-04; C09B027-00; C09B029-03; C09B045-00;  
 C09B067-22

## BASIC ABSTRACT:

EP 73463 A UPAB: 19930925  
 Occlusion cpds., intercalation cpds. and solid solns. are claimed comprising a coloured organometallic cpd. (I) having a layer shaped crystal lattice in which the bonding within the layer is essentially by way of hydrogen bridges and/or metal ions and containing another occluded cpd., with the exception of a compsn. comprising 45-82 weight% of an azobarbituric acid-nickel-1:1 complex (II), 3-15 weight% benzenesulphonamide, 5-20 weight% Ni acetate and 10-20 weight% water.  
 Pref. (I) is a metal salt or metal complex, especially a Ni salt or complex  
 of a cpd. having tautomeric structures (III) in which X and Y are rings which may each carry one or two substituents chosen from =O, =S, =NR7, -NR6R7, -OR6, -SR6, -COOR6, -CN, -CONR6R7, -SO2R8, -N(R6)-CN, alkyl, cycloalkyl, aryl, or aralkyl, and the sum of the endo- and exocyclic double bonds for each ring X and Y is 3; R6 is H, alkyl, cycloalkyl, aryl or aralkyl; R7 is H, CN, alkyl, cycloalkyl, aryl, aralkyl or acyl; R8 is alkyl, cycloalkyl, aryl or aralkyl; R1, R2, R3 and R4 are H, alkyl, cycloalkyl, aryl, or aralkyl, or (as shown by dotted lines in (III)) may form 5 or 6 membered rings to which further rings may be condensed; and R5 is -OH, -NR6R7, alkyl, cycloalkyl, aryl or aralkyl; R1-R8 CH-bond containing gps. may be substd.; and m,n,o and p are 1 or (if the ring N carries a double bond as shown by dotted lines) zero.

The prods. may contain occluded cyclic or acyclic organic cpds., carboxylic acid amides, sulphonamides, surface active cpds., especially tensides, natural resins and rosin acids, polymers, water-soluble polymers, dyes or pigments. The prods. are especially useful as pigments with improved properties for use in paints, printing inks, polymers, spinning solns., etc. The pigments have excellent heat resistance and light and weather resistance and by choosing the occluded cpd., properties such as good dispersibility, gloss, brilliance, colour tone, etc., can be influenced.

FILE SEGMENT: CPI

FIELD AVAILABILITY: AB

MANUAL CODES: CPI: A08-E04; E21-C13; E21-C17; G02-A03A; G02-A04B

ABEQ EP 73463 B UPAB: 19930925

Inclusion cpds. intercalation compounds and solid solutions, characterised in that a coloured organic metal compound which forms a crystal lattice with a layer structure in which the bonding within a layer takes place essentially via hydrogen bridges and/or metal ions contains at least one other included compound, except for one composition of matter which consists of 45 to 82% by weight of azobarbituric acid/nickel 1:1 complex, 3 to 15% by weight of benzene-sulphonamide, 5

to 20% by weight of nickel acetate and 10 to 20% by weight of water.

ABEQ US 4622391 A UPAB: 19930925

Inclusion cpd., intercalation cpd. or solid soln. which is a Ni salt or Ni complex of a cpd. which, in one of its tautomeric forms, corresponds to the formula (I) in which rings X and Y are opt. subst. by 1 or 2 =O, =S, =NR7, -NR6R7, -OR6, -SR6, -COOR6, -CN, -CONR6R7, -SO2R8, -N(R6)CN, alkyl, cycloalkyl, aryl or aralkyl substs., the total number of endocyclic and exocyclic double bonds for each of rings X and Y being 3; R6 is H, alkyl, cycloalkyl, aryl or aralkyl; R7 is H, CN, alkyl, cycloalkyl, aryl, aralkyl, 1-6C alkyl-carbonyl, phenylcarbonyl, 1-6C alkylsulphonyl, phenylsulphonyl, opt. subst. carbamoyl, opt. subst. sulphamoyl or opt. subst. guanyl; R8 is alkyl, cycloalkyl, aryl or aralkyl; R1, R2, R3 and R4 are H, alkyl, cycloalkyl, aryl or aralkyl or, as indicated by the broken lines in the formula, form a triazole, imidazole, benzimidazole, pyrimidine or quinazoline ring, or a triazole, imidazole, benzimidazole, pyrimidine or quinazoline ring to which further rings are fused; R5 is OH, -NR6R7, alkyl, cycloalkyl, aryl or aralkyl; and m, n, o and p are each 1 or, where double bonds extend from the ring N-atoms, as indicated by the dotted lines in the formula, are each 0 or 1 contg. at least one other included cpd., except for one compsn. comprising 45-82% by wt. of azobarbituric acid/nickel 1:1 complex, 3-15% by wt. of benzene-sulphonamide, 5-20% by wt. of nickel acetate and 10-20% by wt. of water.

USE - Cpd. is used as pigment for all pigment applications.

L84 ANSWER 105 OF 105 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

ACCESSION NUMBER: 1977-05586Y [04] WPIX

TITLE: Bulk dyeing of nonreducing thermoplastic resins - using magnesium, zinc cadmium or nickel salts of sulphonic acids containing azo gp. and hydroxy naphthalene.

DERWENT CLASS: A60 E21 F01

PATENT ASSIGNEE(S): (CIBA) CIBA GEIGY AG

COUNTRY COUNT: 9

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
BE 843712	A	19770103	(197704)*			
NL 7606996	A	19770106	(197704)			
DE 2629639	A	19770127	(197705)			
JP 52009047	A	19770124	(197710)			
FR 2316276	A	19770304	(197715)			
US 4083687	A	19780411	(197822)			
CH 601389	A	19780714	(197833)			
GB 1521577	A	19780816	(197833)			
CA 1083287	A	19800805	(198034)			
JP 59016570	B	19840416	(198419)			
DE 2629639	C	19851031	(198545)			

PRIORITY APPLN. INFO: CH 1975-8743 19750704

INT'L PATENT CLASSIF.: C08J003-20; C08K005-00; C08L023-00; C09B029-10; C09B045-00; D06P001-10; D06P003-00

BASIC ABSTRACT:

BE 843712 A UPAB: 19930901

The dyes are Mg, Zn, Cd or Ni salts (I) of acids of formula (I), where A is phenyl or naphthyl opt. subst. by halogen, 1-4C alkyl or alkoxy, or CF<sub>3</sub>; X is H or COOH; and n 1 or 2.

Used especially for bulk dyeing of polyolefins but also for PVC, polystyrene, ABS **copolymers**, polyesters etc. Unlike Ca, Sn or Ba salts of (I) the above salts are stable to heat. The Mg salts non-toxic and the Cd salts fast to light. The salts are also easily dispersed and non-migrating.

FILE SEGMENT: CPI

FIELD AVAILABILITY: AB

MANUAL CODES: CPI: A08-E04; E21-C10; E21-C11; E21-C16; F01-D; F03-F16

=> d his 183

(FILE 'HCAPLUS, MEDLINE, BIOSIS, PASCAL, APOLLIT, JICST-EPLUS, EMBASE, SCISEARCH, WPIX, CONF, CONESCI' ENTERED AT 15:19:10 ON 27 JUL 2005)

L83 13 S L81 AND L82

=> d que 183

L79 2617 SEA WEISS, T?/AU  
 L80 1246 DUP REM L79 (1371 DUPLICATES REMOVED)  
 L81 29 SEA L80 AND ?CATALY?  
 L82 42 SEA L80 AND ?POLYMER?  
 L83 13 SEA L81 AND L82

=> d ibib ed ab 183

YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:y

L83 ANSWER 1 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:191022 HCAPLUS  
 TITLE: Acrylonitrile insertion into Pd methyl bonds  
 AUTHOR(S): Groux, Laurent F.; Weiss, Thomas; Piers, Warren E.  
 CORPORATE SOURCE: Department of Chemistry, University of Calgary,  
 Calgary, AB, T2N 1N4, Can.  
 SOURCE: Abstracts of Papers, 229th ACS National Meeting, San  
 Diego, CA, United States, March 13-17, 2005 (2005),  
 INOR-634. American Chemical Society: Washington, D.C.  
 CODEN: 69GQMP  
 DOCUMENT TYPE: Conference; Meeting Abstract  
 LANGUAGE: English  
 ED Entered STN: 06 Mar 2005  
 AB Homogeneous, single site homo- and copolymer. of polar monomers by transitions metal remains a significant challenge in polymerization catalysis. Our chosen monomer, acrylonitrile (AN), has been reacted with new Pd catalysts, one of them being specially designed to favor the  $\pi$ - vs N-bonding of AN by the addition of an anionic BF<sub>3</sub>- group on the ligand framework (complex c). Kinetic studies showed the rapid N-coordination of AN at low temperature (-60°C). Above -30°C, isomerization to the  $\pi$ -bound AN species (not observed) followed by 2,1-insertion into the Pd-Me bond take place. Activation parameters of  $\Delta H^- = 14.4(5)$  kcal mol<sup>-1</sup> and  $\Delta S^- = -19(5)$  eu were obtained for the insertion of AN in complex b. The presence of the BF<sub>3</sub>- (complex c) improved the overall rate of insertion by a factor of two but did not prevent the rapid oligomerization of the insertion products through the cyano group to form stable, and unreactive, dimers and trimers.

=> d ibib ed ab 183 2-

YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:y

YOU HAVE REQUESTED DATA FROM 12 ANSWERS - CONTINUE? Y/(N):y

L83 ANSWER 2 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2005:128437 HCAPLUS  
 DOCUMENT NUMBER: 142:392510

TITLE: The Exploration of Neutral Azoligand-Based Grubbs Type Palladium(II) Complex as Potential Catalyst for the Copolymerization of Ethylene with Acrylonitrile: A Theoretical Study Based on Density Functional Theory

AUTHOR(S): Yang, Sheng-Yong; Szabo, Miklos J.; Michalak, Artur; Weiss, Thomas; Piers, Warren E.; Jordan, Richard F.; Ziegler, Tom

CORPORATE SOURCE: Department of Chemistry, University of Calgary, Calgary, AB, T2N 1N4, Can.

SOURCE: Organometallics (2005), 24(6), 1242-1251  
CODEN: ORGND7; ISSN: 0276-7333

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 15 Feb 2005  
 AB A combined quantum-mech. (QM) and mol.-mech. (MM) method was used to explore the potential of neutral azoligand-based Grubbs type Pd(II) complexes as catalysts for ethylene-acrylonitrile copolymer. The 1st part of the study includes complexation of the monomers to the catalyst, the 1st insertion step, and isomerization of the 1st insertion product I. The  $\pi$ -complexation energies of acrylonitrile and ethylene are comparable, but the acrylonitrile insertion has a lower barrier over ethylene insertion by 5 kcal/mol in the 1st step. The leading product I might conduct isomerizations with a lower barrier to form different chelate structures. However, the most stable isomers have the CN group in the  $\alpha$ -position. The 2nd part explores the further role of the kinetic insertion product I. I Readily can complex another ethylene or acrylonitrile monomer. Unfortunately, it is even more favorable for I to coordinate its Pd(II) center to a N atom on a  $\alpha$ -cyano-alkyl group of another I complex, leading to inert oligomers of I that do not further react with ethylene or acrylonitrile. Trimmers of I are preferred over dimers because they allow for an optimal linear Pd-NC bonding mode with an angle of .apprx.180°. The preference for Pd coordination to the N on a  $\alpha$ -cyano-alkyl group over N-coordination to acrylonitrile stems from the fact that the acrylonitrile N is less electron rich due to donation to the  $\pi^*$  orbital of the olefinic bond.

REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L83 ANSWER 3 OF 13 HCPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2005:64316 HCPLUS  
 DOCUMENT NUMBER: 142:336672  
 TITLE: Insertion of Acrylonitrile into Palladium Methyl Bonds in Neutral and Anionic Pd(II) Complexes  
 AUTHOR(S): Groux, Laurent F.; Weiss, Thomas; Reddy, Dastigiri N.; Chase, Preston A.; Piers, Warren E.; Ziegler, Tom; Parvez, Masood; Benet-Buchholz, Jordi  
 CORPORATE SOURCE: Department of Chemistry, University of Calgary, Calgary, AB, T2N 1N4, Can.  
 SOURCE: Journal of the American Chemical Society (2005), 127(6), 1854-1869  
CODEN: JACSAT; ISSN: 0002-7863  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 ED Entered STN: 25 Jan 2005  
 AB The reactions of a series of Pd(II) Me compds. of general formula LPd(NCCH<sub>3</sub>)CH<sub>3</sub>, where L is a bulky phenoxydiazone or phenoxyaldimine ligand

with the polar olefin acrylonitrile (AN), are reported. The compds. react with an excess of AN to give the products of 2,1 insertion into the Pd-Me bond, yielding dimers and/or trimers which feature bridging  $\alpha$ -cyano groups. The reactions were studied by low temperature  $^1\text{H}$  NMR spectroscopy, revealing an initial formation of compds. featuring N-bound AN, which isomerized to an (unobserved)  $\pi$ -bound species that rapidly underwent 2,1 insertion into the Pd-Me bond. Intermediate oligomeric complexes retaining a Pd-Me function were observed at low [AN] in these reactions. Under pseudo first-order conditions, kobs values of  $8.5 + 10^{-5}$  to  $2.68 + 10^{-3} \text{ M}^{-1} \text{ s}^{-1}$  (-22 °C to 10 °C, 100 equiv of AN) and activation parameters of  $\Delta H_{\text{dbldag.}} = 14.4(5) \text{ kcal mol}^{-1}$  and  $\Delta S_{\text{dbldag.}} = -19(5) \text{ eu}$  were obtained in one case. Comparison of the overall rates of insertion between two LPd(NCCH<sub>3</sub>)CH<sub>3</sub>, differing in the overall charge on the supporting ligand L, showed that the complex bearing a neg. charged ligand reacts with AN twice as fast as one with no anionic charge. The rates of insertion in both of these complexes are significantly faster than reported rates for analogous reactions in cationic Pd(II) derivs., indicating that increasing the neg. charge on the complex enhances the rate of AN insertion. These results provide fundamental mechanistic insights into a crucial reaction for incorporation of polar comonomers into alpha olefins via a coordination **polymn** mechanism.

REFERENCE COUNT: 94 THERE ARE 94 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L83 ANSWER 4 OF 13 HCPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:810953 HCPLUS

DOCUMENT NUMBER: 142:23370

TITLE: Polar Copolymerization by a Palladium-Diimine-Based Catalyst. Influence of the Catalyst Charge and Polar Substituent on Catalyst Poisoning and Polymerization Activity. A Density Functional Theory Study

AUTHOR(S): Szabo, Miklos J.; Jordan, Richard F.; Michalak, Artur; Piers, Warren E.; Weiss, Thomas; Yang, Sheng-Yong; Ziegler, Tom

CORPORATE SOURCE: Department of Chemistry, University of Calgary, Calgary, AB, T2N 1N4, Can.

SOURCE: Organometallics (2004), 23 (23), 5565-5572  
CODEN: ORGND7; ISSN: 0276-7333

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 06 Oct 2004

AB Copolymn. of ethylene with electroneg. alkenes catalyzed by palladium diimine complex was explored by DFT calcns. Combined gradient-corrected d. functional theory and mol. mechanics (QM/MM) was used to investigate the copolymn. of ethylene with the CH<sub>2</sub>:CHX (2a-f; X = H, Me, CN, COOMe, OCOMe, Cl). The cationic complex [(ArN:CR<sub>2</sub>CR<sub>3</sub>:NAr- $\kappa$ N, $\kappa$ N')PdMe]<sup>+</sup> (Ar = 2,6-iPr<sub>2</sub>C<sub>6</sub>H<sub>3</sub>, 1, R<sub>2</sub> = H) and its neutral and anionic analogs (R<sub>2</sub> = BH<sub>3</sub><sup>-</sup>, R<sub>3</sub> = H and R<sub>2</sub> = R<sub>3</sub> = BH<sub>3</sub><sup>-</sup>, resp.) were used as catalysts. The consecutive insertion steps of CH<sub>2</sub>:CHX into the Pd-Me bond and of ethylene into the Pd-C(X)HCH<sub>2</sub>CH<sub>3</sub> bond were investigated. Focus was put on the role of the X functional groups and the effect of the cationic, neutral, and anionic environments on the Pd(II)-diimine system. Calcns. were performed on the CH<sub>2</sub>:CHX monomers, model catalysts, precursor  $\pi$ -complexes, and  $\sigma$ -complexes of the monomers, as well as the chelate and H-agostic insertion products. The transition state of the insertion reaction and the corresponding

activation energy was determined for both investigated insertion steps. The results show that the X group has only a minor effect on the insertion of the CH<sub>2</sub>:CHX monomers into the Pd-CH<sub>3</sub> bond. On the other hand, the barrier for insertion of ethylene into the Pd-CHXR bond revealed an increase with the electron-withdrawing ability of X. The application of neutral and anionic **catalysts** leads to a preference for  $\pi$ -complexation over  $\sigma$ -complexation of the polar monomers. Unfortunately, for an anionic model system the barriers for the first and second insertion are significantly increased for ethylene, whereas the first insertion barrier for the polar monomers only is moderately increased. Thus, while anionic **catalysts** are highly tolerant toward polar monomers, they are nearly inactive toward ethylene insertion.

REFERENCE COUNT: 84 THERE ARE 84 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L83 ANSWER 5 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004:753180 HCAPLUS  
 DOCUMENT NUMBER: 141:261201  
 TITLE: Method of preparing of olefin polymerization catalyst containing azo group  
 INVENTOR(S): Weiss, Thomas  
 PATENT ASSIGNEE(S): Bayer A.-G., Germany  
 SOURCE: Eur. Pat. Appl., 25 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1457502	A1	20040915	EP 2004-4501	20040227
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
DE 10310289	A1	20040923	DE 2003-10310289	20030310
US 2004181018	A1	20040916	US 2004-793512	20040304
CA 2459658	AA	20040910	CA 2004-2459658	20040305
JP 2004269889	A2	20040930	JP 2004-63842	20040308
PRIORITY APPLN. INFO.:			DE 2003-10310289	A 20030310

OTHER SOURCE(S): MARPAT 141:261201

ED Entered STN: 16 Sep 2004

AB Azo complexes of 4-12 B group metals used as **catalysts** for (co) polymerization of olefins are prepared by mixing solns. of azo compds. I (Nul and Nu2 = O, S, Se, PRa, NRa or COO, Ra = H or optionally substituted alkyl or aryl group, J = A group 1-2 element, R, R1, R2 and R3 = H, halogen, optionally substituted C1-8 alkyl, C2-8 alkenyl, C3-12 cycloalkyl, C7-13 arylalkyl or C6-14 aryl, R1R2 and R2R3 can form rings) and M(L1)<sub>w</sub>(L2)<sub>y</sub>(L3)<sub>z</sub> (M = a 4-12 side group metal, L1 = neutral ligand, such as phosphines, amines, tetraarylalkyl ethylenediamine, ethers, alcs., derivs. of pyridine, CO, C1-12 alkyl nitrile, C6-14 aryl nitrile, L2 and L3 = anionic ligands, such as halide-, amide-, C1-6 alkyl-, allyl-, methallyl-, benzyl- or aryl-anions, w, y and z = 0-3) in polar solvents. Thus, mixing a solution of II (R1 = R2 = tert-Bu, R3 = R5 = iso-Pr, R4 = H) in a mixture of toluene/chlorobenzene with a solution of bis(1,5-cyclooctadiene)nickel in toluene gave a **catalyst** used in polymerization of ethylene in autoclave at 8 bar and 30-60° in the presence of a mixture of BF<sub>3</sub>/diethyl ether as activator..

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L83 ANSWER 6 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004:719300 HCAPLUS  
 DOCUMENT NUMBER: 141:395629  
 TITLE: Reactions of Zirconocene 2-Vinylpyridine Complexes  
 with Diisobutylaluminum Hydride and Fluoride  
 AUTHOR(S): Arndt, Perdita; Spannenberg, Anke; Baumann, Wolfgang;  
 Burlakov, Vladimir V.; Rosenthal, Uwe; Becke, Sigurd;  
 Weiss, Thomas  
 CORPORATE SOURCE: Leibniz-Institut fuer Organische Katalyse,  
 Universitaet Rostock e. V., Rostock, D-18055, Germany  
 SOURCE: Organometallics (2004), 23(20), 4792-4795  
 CODEN: ORGND7; ISSN: 0276-7333  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 141:395629  
 ED Entered STN: 03 Sep 2004  
 AB Reactions of the zirconocene 2-vinylpyridine complex Cp<sub>2</sub>Zr(2-vipy) (1)  
 with iBu<sub>2</sub>AlH and iBu<sub>2</sub>AlF produced the isostructural complexes  
 [Cp<sub>2</sub>Zr(μ-η<sub>1</sub>:η<sub>2</sub>-2-CH<sub>2</sub>CH-C<sub>5</sub>H<sub>4</sub>N)(μ-H)][iBu<sub>2</sub>Al] (3) and  
 [Cp<sub>2</sub>Zr(μ-η<sub>1</sub>:η<sub>2</sub>-2-CH<sub>2</sub>CH-C<sub>5</sub>H<sub>4</sub>N)(μ-F)][iBu<sub>2</sub>Al] (5). The  
 complexes served as models for the transfer of fluorine from zirconium to  
 aluminum (Zr-F with Al-H to Zr-H and Al-F) found in reaction of  
 rac-(ebthi)ZrF<sub>2</sub> (ebthi = bis(tetrahydroindenyl)ethane) with iBu<sub>2</sub>AlH  
 forming the dimeric complex [rac-(ebthi)ZrH(μ-H)]<sub>2</sub> (6). The compds.  
 are important for obtaining an understanding of the activation of  
 zirconocene fluoro complexes by iBu<sub>3</sub>Al and of the role of iBu<sub>2</sub>AlH in  
 activation processes for the **catalytic polymerization** of  
 olefins. The x-ray crystal structures of complexes 3, 5, and 6 are  
 presented and discussed.  
 REFERENCE COUNT: 57 THERE ARE 57 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L83 ANSWER 7 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004:631256 HCAPLUS  
 DOCUMENT NUMBER: 141:174614  
 TITLE: Monometallic azo complexes of late transition metals  
 for the polymerization of olefins  
 INVENTOR(S): Weiss, Thomas  
 PATENT ASSIGNEE(S): Bayer AG, Germany  
 SOURCE: Ger. Offen., 25 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10304158	A1	20040805	DE 2003-10304158	20030203
EP 1454926	A1	20040908	EP 2004-1164	20040121
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CA 2456518	AA	20040803	CA 2004-2456518	20040130
US 2004186007	A1	20040923	US 2004-768291	20040130
JP 2004238395	A2	20040826	JP 2004-25253	20040202
PRIORITY APPLN. INFO.:			DE 2003-10304158	A 20030203

OTHER SOURCE(S): MARPAT 141:174614

ED Entered STN: 06 Aug 2004

AB The title azo complexes have the formula I, where Nul = O, S, Se, PR<sub>a</sub>, NR<sub>a</sub>

or COO; Ra = H, alkyl or aryl group; R, R1, R2, R3 and R4 = H, halogen, substituted or unsubstituted C1-8 alkyl, C2-8 alkenyl, C3-12 cycloalkyl, C7-13 arylalkyl or C6-14 aryl group; M1 = a group 4-12 element, such as Ti, Zr, Cr, V, Fe, Co, Ni, Pd, Cu or Zn; L1 = a neutral ligand, such as PPh<sub>3</sub>; L2 = an anionic ligand, such as Me, Ph and z = 1-2. The complexes can be used as catalysts for (co)polymerization of olefins and polar olefins.

L83 ANSWER 8 OF 13 HCPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:591544 HCPLUS

DOCUMENT NUMBER: 139:277192

TITLE: Is the polymerization of linear  
α-olefins by transition-metal carbene complexes  
a viable process? A theoretical study based on density  
functional theory

AUTHOR(S): Szabo, Miklos J.; Berke, Heinz; Weiss, Thomas  
; Ziegler, Tom

CORPORATE SOURCE: Department of Chemistry, University of Calgary,  
Calgary, AB, T2N 1N4, Can.

SOURCE: Organometallics (2003), 22(18), 3671-3677  
CODEN: ORGND7; ISSN: 0276-7333

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 03 Aug 2003

AB Gradient-corrected d. functional theory has been used to study the mechanism of α-olefin polymerization catalyzed by transition-metal carbene complexes. Taking the [CH<sub>2</sub>:Re(NO)<sub>2</sub>(PMe<sub>3</sub>)]<sup>+</sup> complex as an example, we investigated the possible elementary steps of the polyethylene formation. This "carbene-to-metallacycle" style mechanism based on a pure carbene intermediate starts with the coordination of the ethylene. Then ethylene reacts with the carbene complex by a [2 + 2] addition. Metallacyclobutane decomposition to a new carbene complex takes place by an α-hydrogen transfer reaction. We have also investigated the possible side reactions for the metallacyclobutane decomposition by metathesis reaction, cyclization, and β-hydride transfer reactions. Calcs. have been performed on the monomer and carbene complexes, on the possible intermediates, ethylene π-complexes, metallacyclobutanes, cyclopropyl complexes, cyclopropyl hydride complexes, propylidene complexes, propene π-complexes, allyl-hydride intermediates, and transition states. The results show that when the [CH<sub>2</sub>:Re(NO)<sub>2</sub>(PMe<sub>3</sub>)]<sup>+</sup> complex is used as a catalyst, the β-hydride transfer is both kinetically and thermodynamically favored over the α-hydride transfer reaction; therefore, ethylene polymerization is not viable. Modifying the catalyst by changing the metal center does not change the preference for the β-elimination products. However, the application of strongly electron donating ligands can make the metal center sufficiently electron rich to stabilize the new propylidene ligand over the formation of an olefin π-complex.

REFERENCE COUNT: 78 THERE ARE 78 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L83 ANSWER 9 OF 13 HCPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:944509 HCPLUS

DOCUMENT NUMBER: 138:25075

TITLE: Olefin polymerization catalysts  
based on 1,3-disubstituted 2-position bridged indenyl  
transition metal complexes

INVENTOR(S): Becke, Sigurd; Weiss, Thomas; Lang, Heinrich

PATENT ASSIGNEE(S): Bayer AG, Germany

SOURCE: Eur. Pat. Appl., 31 pp.  
 CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1264835	A1	20021211	EP 2002-11576	20020527
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
DE 10127926	A1	20021212	DE 2001-10127926	20010608
US 2003027954	A1	20030206	US 2002-162828	20020604
US 6723676	B2	20040420		
CA 2389407	AA	20021208	CA 2002-2389407	20020605
JP 2003048893	A2	20030221	JP 2002-165982	20020606
PRIORITY APPLN. INFO.:			DE 2001-10127926	A 20010608

OTHER SOURCE(S): MARPAT 138:25075

ED Entered STN: 13 Dec 2002

AB Transition metal complexes of indene derivs. of specified structure I are synthesized and used as catalysts for polymerization of  $\alpha$ -olefins, where A is a benzene or tetrahydrocyclohexyl ring, Q1, Q2 and Q3 are same or different and can be H, C1-4 alkyl, C6-14 aryl, C7-10 aralkyl, C1-4 alkoxy or C1-4 alkylthio, phenoxy, phenylthio, dialkylamino, arylalkylamino, diarylamino, dibenzylamino, trialkylsilyl, dialkylboranyl, phenylalkylboranyl, diphenylboranyl, dialkylphosphoryl, diphenylphosphoryl or phenylalkylphosphoranyl, M = Group 4-6 metals, X = an anion, n = 0-4, m = 0-4, Y = a divalent bridging group selected from C(R1R2), Si(R1R2), Ge(R1R2), C(R1R2)C(R3R4), C(R1R2)Si(R3R4) or Si(R1R2)Si(R3R4), Z = N(R5), P(R6), O or S (R1-R6 = H, halogen, C1-10 alkyl, C5-8 cycloalkyl, C6-14 aryl or C7-10 aralkyl). The catalyst can be used to produce high mol. weight  $\alpha$ -olefin (co) polymer, such as Ethylene/5-ethylidene-2-norbornene/propylene tercopolymer or EPDM rubber.

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L83 ANSWER 10 OF 13 HCPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:100957 HCPLUS

DOCUMENT NUMBER: 136:369784

TITLE: A 2-indenyl-amido-bridged titanium complex with Cs-symmetry

AUTHOR(S): Weiss, Thomas; Becke, Sigurd; Sachse, Helga;  
 Rheinwald, Gerd; Lang, Heinrich

CORPORATE SOURCE: Technische Universitat Chemnitz, Institut fur Chemie,  
 Fakultat fur Naturwissenschaften, Lehrstuhl fur  
 Anorganische Chemie, Chemnitz, D-09111, Germany

SOURCE: Inorganic Chemistry Communications (2002), 5 (2),  
 159-162

PUBLISHER: CODEN: ICCOFP; ISSN: 1387-7003  
 Elsevier Science S.A.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 136:369784

ED Entered STN: 06 Feb 2002

AB A novel Cs-sym. constrained Ti(IV) indenylsilyamido bridged complex I and the preparation thereof is described; the solid-state structure and the use of I as a single site catalyst in the copolymer. of ethene and propene is reported.

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L83 ANSWER 11 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2001:559587 HCAPLUS  
 DOCUMENT NUMBER: 135:137848  
 TITLE: Organometallic compounds with annelated indenyl ligands as polymerization catalysts  
 INVENTOR(S): Becke, Sigurd; Lang, Heinrich; Weiss, Thomas  
 PATENT ASSIGNEE(S): Bayer A.-G., Germany  
 SOURCE: Eur. Pat. Appl., 21 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1120424	A2	20010801	EP 2001-100145	20010116
EP 1120424	A3	20021016		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
DE 10003581	A1	20010802	DE 2000-10003581	20000128
US 2001014725	A1	20010816	US 2001-767491	20010123
US 6613713	B2	20030902		
CA 2332165	AA	20010728	CA 2001-2332165	20010125
JP 2001253895	A2	20010918	JP 2001-20072	20010129
PRIORITY APPLN. INFO.:			DE 2000-10003581	A 20000128

OTHER SOURCE(S): MARPAT 135:137848

ED Entered STN: 03 Aug 2001

AB Transition metal complexes with annelated indenyl compound ligands of specified structure are catalysts for the polymerization of olefins and diolefins. Stirring 0.5 mol indan with 0.5 mol acryloyl chloride and AlCl<sub>3</sub> in CH<sub>2</sub>Cl<sub>2</sub> at 0° and then at 25° gave 24% 5,6,7-tetrahydroindacen-1-one (I), reduction of which with NaBH<sub>4</sub> in Et<sub>2</sub>O gave the corresponding alc., refluxing of which with p-MeC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>H in C<sub>6</sub>H<sub>6</sub> gave 90% (based on I) 5,6,7-tetrahydroindacene, bromination of which in Et<sub>2</sub>O gave 77% 1,2-dibromo derivative, dehydrobromination of which in refluxing tetralin gave 14% 2-bromo-5,6,7-tetrahydroindacen. Grignard reaction of this compound with Me<sub>2</sub>SiCl<sub>2</sub> gave 97% chlorodimethyl(5,6,7-tetrahydroindenyl)silane, reaction of which with tert-BuNH<sub>2</sub> in Et<sub>2</sub>O at 0° gave 94% tert-butylamino-2-(5,6,7-tetrahydroindacenyl)dimethylsilane, reaction of which with BuLi and then TiCl<sub>3</sub>.3THF in pentane at -78 to +25° gave 60% tert-butylamino-2-(5,6,7-tetrahydroindacenyl)dimethylsilyl)titanium dichloride. Use of this compound in the polymerization of C<sub>3</sub>H<sub>6</sub> is exemplified.

L83 ANSWER 12 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1999:579550 HCAPLUS  
 DOCUMENT NUMBER: 131:200278  
 TITLE: Catalysts for preparation of atactic propylene (co)polymers  
 INVENTOR(S): Lang, Heinrich; Weiss, Thomas; Becke, Sigurd  
 PATENT ASSIGNEE(S): Bayer Aktiengesellschaft, Germany  
 SOURCE: Eur. Pat. Appl., 19 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 940412	A1	19990908	EP 1999-103233	19990219
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
DE 19809160	A1	19990909	DE 1998-19809160	19980304
CA 2263176	AA	19990904	CA 1999-2263176	19990301
JP 11292934	A2	19991026	JP 1999-54218	19990302
PRIORITY APPLN. INFO.:*			DE 1998-19809160	A 19980304

OTHER SOURCE(S): MARPAT 131:200278

ED Entered STN: 15 Sep 1999

AB The title **catalysts**, giving amorphous, highly atactic polymers, contain transition metal compds. bearing 2-indenyl compds. of specified structure as ligands. Stirring 23 mmol chloro-2-indenylidimethylsilane (prepared in 95% yield from 2-bromoindene 20, Mg 30, and Me<sub>2</sub>SiCl<sub>2</sub> 40 mmol in THF) with 22 mmol indenyllithium in Et<sub>2</sub>O at 25° for 2 h gave 47% 1-indenyl-2-indenylidimethylsilane, stirring of which (3.5 mmol) with 7 mmol BuLi in THF-Et<sub>2</sub>O-hexane at 25° for 15 h and stirring the resulting Li salt with 3.5 mmol ZrCl<sub>4</sub> in PhMe at 25° for 15 h gave 96% (1-indenyl-2-indenylidimethylsilyl)zirconium dichloride (I). Stirring 10 μmol I with 5 mL 10% Me aluminoxane and C<sub>3</sub>H<sub>6</sub> in PhMe at 40°/1.1 bar for 1 h gave 12.2 g amorphous, solid polypropylene.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L83 ANSWER 13 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:579549 HCAPLUS

DOCUMENT NUMBER: 131:200278

TITLE: Metalorganic compounds as **catalysts** for polymerization of olefins

INVENTOR(S): Lang, Heinrich; Weiss, Thomas; Becke, Sigurd

PATENT ASSIGNEE(S): Bayer Aktiengesellschaft, Germany

SOURCE: Eur. Pat. Appl., 24 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 940408	A1	19990908	EP 1999-103231	19990219
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
DE 19809159	A1	19990909	DE 1998-19809159	19980304
US 6248912	B1	20010619	US 1999-258557	19990226
CA 2263185	AA	19990904	CA 1999-2263185	19990301
JP 11315089	A2	19991116	JP 1999-53249	19990301
PRIORITY APPLN. INFO.:*			DE 1998-19809159	A 19980304

OTHER SOURCE(S): MARPAT 131:200278

ED Entered STN: 15 Sep 1999

AB Transition metal compds. of indene derivs. of specified structure are prepared and used as **catalysts** for polymerization of α-olefins, dienes, and cycloalka(di)enes. Stirring 23 mmol chloro-2-indenylidimethylsilane (prepared in 95% yield from 2-bromoindene, Mg and Me<sub>2</sub>SiCl<sub>2</sub> in THF) with 22 mmol indenyllithium in Et<sub>2</sub>O at 25° for 2 h and heating to reflux gave 47% 1-indenyl-2-indenylidimethylsilane,

reaction of which (3.5 mmol) with 7 mmol BuLi in THF-Et<sub>2</sub>O and then with 3.5 mmol ZrCl<sub>4</sub> in PhMe gave 96% (1-indenyl-2-indenyldimethylsilyl)zirconium dichloride (I). Stirring 1 μmol I (preactivated with Me aluminoxane) with 5 mL Me aluminoxane and C<sub>2</sub>H<sub>4</sub> in PhMe at 40°/7 bar for 15 min gave 13.2 g polyethylene.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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FILE COVERS 1907 - 27 Jul 2005 VOL 143 ISS 5  
FILE LAST UPDATED: 26 Jul 2005 (20050726/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> fil medlin
FILE 'MEDLINE' ENTERED AT 15:23:17 ON 27 JUL 2005
FILE LAST UPDATED: 26 JUL 2005 (20050726/UP). FILE COVERS 1950 TO DATE.
```

On December 19, 2004, the 2005 MeSH terms were loaded.

The MEDLINE reload for 2005 is now available. For details enter HELP RLOAD at an arrow prompt (=>). See also:

<http://www.nlm.nih.gov/mesh/>  
[http://www.nlm.nih.gov/pubs/techbull/nd04/nd04\\_mesh.html](http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html)

OLDMEDLINE now back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2005 vocabulary.

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```
=> fil biosis
FILE 'BIOSIS' ENTERED AT 15:23:20 ON 27 JUL 2005
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```

FILE COVERS 1969 TO DATE.  
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT  
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 21 July 2005 (20050721/ED)

FILE RELOADED: 19 October 2003.

=> fil pascal  
FILE 'PASCAL' ENTERED AT 15:23:23 ON 27 JUL 2005  
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FILE LAST UPDATED: 25 JUL 2005 <20050725/UP>  
FILE COVERS 1977 TO DATE.

>>> SIMULTANEOUS LEFT AND RIGHT TRUNCATION IS AVAILABLE  
IN THE BASIC INDEX (/BI) FIELD <<<

=> fil apollit  
FILE 'APOLLIT' ENTERED AT 15:23:27 ON 27 JUL 2005  
COPYRIGHT (c) 2005 FIZ Karlsruhe

FILE LAST UPDATED: 27 JUL 2005 <20050727/UP>  
FILE COVERS 1973 TO DATE

=> fil jicst  
FILE 'JICST-EPLUS' ENTERED AT 15:23:32 ON 27 JUL 2005  
COPYRIGHT (C) 2005 Japan Science and Technology Agency (JST)

FILE COVERS 1985 TO 25 JUL 2005 (20050725/ED)

THE JICST-EPLUS FILE HAS BEEN RELOADED TO REFLECT THE 1999 CONTROLLED  
TERM (/CT) THESAURUS RELOAD.

=> fil embase  
FILE 'EMBASE' ENTERED AT 15:23:35 ON 27 JUL 2005  
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FILE COVERS 1974 TO 21 Jul 2005 (20050721/ED)

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substance identification.

=> fil scisearch  
FILE 'SCISEARCH' ENTERED AT 15:23:39 ON 27 JUL 2005  
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FILE COVERS 1974 TO 22 Jul 2005 (20050722/ED)

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=> fil wpix

FILE 'WPIX' ENTERED AT 15:23:42 ON 27 JUL 2005  
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FILE LAST UPDATED: 25 JUL 2005 <20050725/UP>  
MOST RECENT DERWENT UPDATE: 200547 <200547/DW>  
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,  
PLEASE VISIT:  
[<<<](http://www.stn-international.de/training_center/patents/stn_guide.pdf)

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE  
[<<<](http://thomsonderwent.com/coverage/latestupdates/)

>>> FOR INFORMATION ON ALL DERWENT WORLD PATENTS INDEX USER  
GUIDES, PLEASE VISIT:  
[<<<](http://thomsonderwent.com/support/userguides/)

>>> NEW! FAST-ALERTING ACCESS TO NEWLY-PUBLISHED PATENT  
DOCUMENTATION NOW AVAILABLE IN DERWENT WORLD PATENTS INDEX  
FIRST VIEW - FILE WPIFV.  
FOR FURTHER DETAILS: [<<<](http://www.thomsonderwent.com/dwpifv)

>>> THE CPI AND EPI MANUAL CODES HAVE BEEN REVISED FROM UPDATE 200501.  
PLEASE CHECK:  
<http://thomsonderwent.com/support/dwpieref/reftools/classification/code-revision/>  
FOR DETAILS. <<<

=> fil conf  
FILE 'CONF' ENTERED AT 15:23:46 ON 27 JUL 2005  
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FILE LAST UPDATED: 22 JUL 2005 <20050722/UP>  
FILE COVERS 1976 TO DATE.

=> fil confsci  
FILE 'CONFSCI' ENTERED AT 15:23:50 ON 27 JUL 2005  
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FILE COVERS 1973 TO 25 May 2005 (20050525/ED)

=> fil uspatfull  
FILE 'USPATFULL' ENTERED AT 15:23:55 ON 27 JUL 2005  
CA INDEXING COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 26 Jul 2005 (20050726/PD)  
FILE LAST UPDATED: 26 Jul 2005 (20050726/ED)  
HIGHEST GRANTED PATENT NUMBER: US6922846  
HIGHEST APPLICATION PUBLICATION NUMBER: US2005160510  
CA INDEXING IS CURRENT THROUGH 26 Jul 2005 (20050726/UPCA)  
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 26 Jul 2005 (20050726/PD)  
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2005  
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2005

>>> USPAT2 is now available. USPATFULL contains full text of the <<<  
>>> original, i.e., the earliest published granted patents or <<<  
>>> applications. USPAT2 contains full text of the latest US <<<  
>>> publications, starting in 2001, for the inventions covered in <<<  
>>> USPATFULL. A USPATFULL record contains not only the original <<<  
>>> published document but also a list of any subsequent <<<

>>> publications. The publication number, patent kind code, and <<<  
>>> publication date for all the US publications for an invention <<<  
>>> are displayed in the PI (Patent Information) field of USPATFULL <<<  
>>> records and may be searched in standard search fields, e.g., /PN, <<<  
>>> /PK, etc. <<<

>>> USPATFULL and USPAT2 can be accessed and searched together <<<  
>>> through the new cluster USPATALL. Type FILE USPATALL to <<<  
>>> enter this cluster. <<<  
>>> <<<  
>>> Use USPATALL when searching terms such as patent assignees, <<<  
>>> classifications, or claims, that may potentially change from <<<  
>>> the earliest to the latest publication. <<<

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> fil uspat2  
FILE 'USPAT2' ENTERED AT 15:23:59 ON 27 JUL 2005  
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FILE COVERS 2001 TO PUBLICATION DATE: 26 Jul 2005 (20050726/PD)  
FILE LAST UPDATED: 26 Jul 2005 (20050726/ED)  
HIGHEST GRANTED PATENT NUMBER: US2005131306  
HIGHEST APPLICATION PUBLICATION NUMBER: US2005160493  
CA INDEXING IS CURRENT THROUGH 26 Jul 2005 (20050726/UPCA)  
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 26 Jul 2005 (20050726/PD)  
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2005  
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2005

USPAT2 is a companion file to USPATFULL. USPAT2 contains full text of the latest US publications, starting in 2001, for the inventions covered in USPATFULL. USPATFULL contains full text of the original published US patents from 1971 to date and the original applications from 2001. In addition, a USPATFULL record for an invention contains a complete list of publications that may be searched in standard search fields, e.g., /PN, /PK, etc.

USPATFULL and USPAT2 can be accessed and searched together through the new cluster USPATALL. Type FILE USPATALL to enter this cluster.

Use USPATALL when searching terms such as patent assignees, classifications, or claims, that may potentially change from the earliest to the latest publication.

=> fil caold  
FILE 'CAOLD' ENTERED AT 15:24:02 ON 27 JUL 2005  
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FILE COVERS 1907-1966  
FILE LAST UPDATED: 01 May 1997 (19970501/UP)

This file contains CAS Registry Numbers for easy and accurate substance identification. Title keywords, authors, patent assignees, and patent information, e.g., patent numbers, are now searchable from 1907-1966. TIFF images of CA abstracts printed between 1907-1966 are available in the PAGE

display formats.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file supports REGISTRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

```
=> fil toxcenter
FILE 'TOXCENTER' ENTERED AT 15:24:06 ON 27 JUL 2005
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FILE COVERS 1907 TO 19 Jul 2005 (20050719/ED)

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TOXCENTER has been enhanced with new files segments and search fields. See HELP CONTENT for more information.

TOXCENTER thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2005 vocabulary. See <http://www.nlm.nih.gov/mesh/> and [http://www.nlm.nih.gov/pubs/techbull/nd04/nd04\\_mesh.html](http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html) for a description of changes.

```
=> fil casreact
FILE 'CASREACT' ENTERED AT 15:24:10 ON 27 JUL 2005
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FILE CONTENT:1840 - 24 Jul 2005 VOL 143 ISS 4

New CAS Information Use Policies, enter HELP USAGETERMS for details.

```
*****
*
*      CASREACT now has more than 9.2 million reactions
*
*****
```

Some CASREACT records are derived from the ZIC/VINITI database (1974-1991) provided by InfoChem, INPI data prior to 1986, and Biotransformations database compiled under the direction of Professor Dr. Klaus Kieslich.

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> file stnguide
FILE 'STNGUIDE' ENTERED AT 15:24:12 ON 27 JUL 2005
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AND TECHNOLOGY CORPORATION, AND FACHINFORMATIONSZENTRUM KARLSRUHE
```

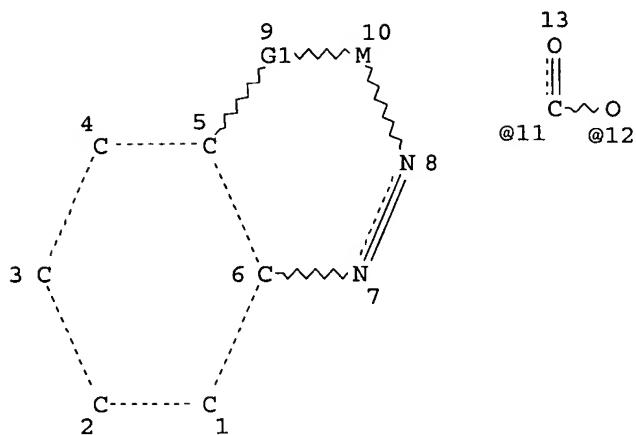
Nwaonicha 10/768,291

07/27/2005

FILE CONTAINS CURRENT INFORMATION.  
LAST RELOADED: Jul 22, 2005 (20050722/UP).

=> d que stat l8

L6 STR



VAR G1=O/S/SE/P/N/11/12

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

MLEVEL IS CLASS AT 7 8 10

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE

L8 19568 SEA FILE=REGISTRY SSS FUL L6

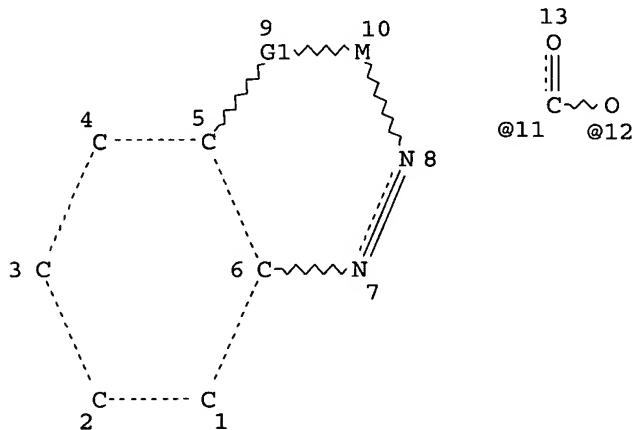
100.0% PROCESSED 136021 ITERATIONS

19568 ANSWERS

SEARCH TIME: 00.00.01

=> d que stat l16

L6 STR



VAR G1=O/S/SE/P/N/11/12

NODE ATTRIBUTES:

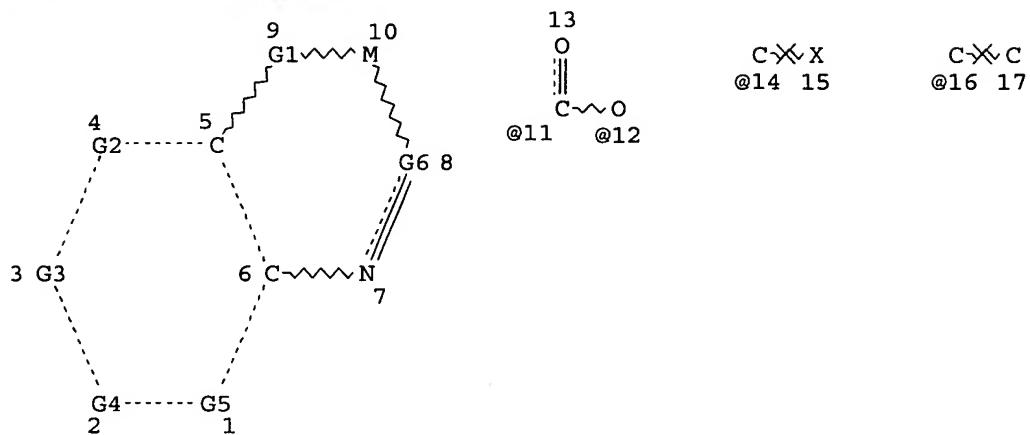
DEFAULT MLEVEL IS ATOM

MLEVEL IS CLASS AT 7 8 10  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE  
 L8 19568 SEA FILE=REGISTRY SSS FUL L6

L14 # STR



N-X @18 19      N-X-C @20 21

VAR G1=O/S/SE/P/N/11/12  
 VAR G2=CH/14/16  
 VAR G3=CH/14/16  
 VAR G4=CH/14/16  
 VAR G5=CH/14/16  
 VAR G6=NH/18/20

NODE ATTRIBUTES:

NSPEC IS RC AT 15  
 NSPEC IS RC AT 17  
 NSPEC IS RC AT 19  
 NSPEC IS RC AT 21

DEFAULT MLEVEL IS ATOM  
 MLEVEL IS CLASS AT 7 10  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 21

STEREO ATTRIBUTES: NONE

L16 7180 SEA FILE=REGISTRY SUB=L8 SSS FUL L14

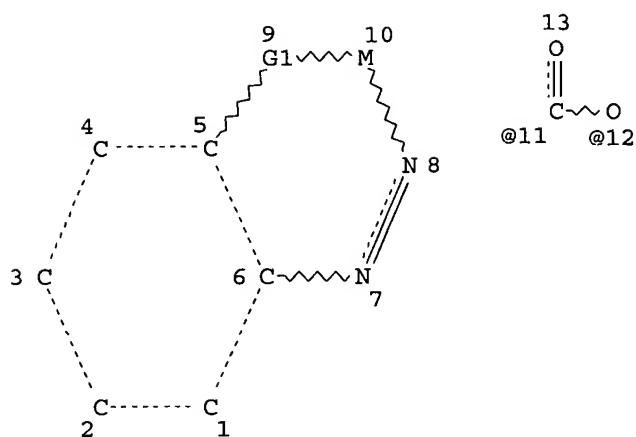
100.0% PROCESSED 19568 ITERATIONS  
 SEARCH TIME: 00.00.01

7180 ANSWERS

=> d que 143

L6

STR



VAR G1=O/S/SE/P/N/11/12

NODE ATTRIBUTES:

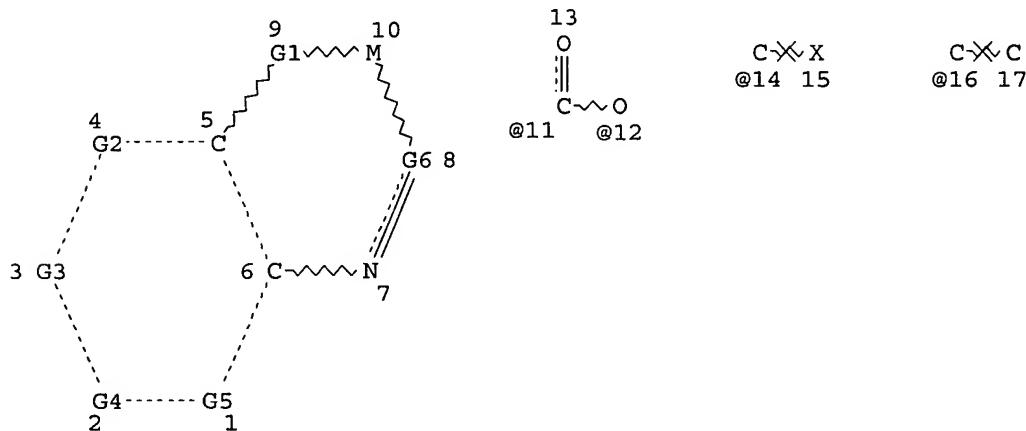
DEFAULT MLEVEL IS ATOM  
 MLEVEL IS CLASS AT 7 8 10  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE

L8 19568 SEA FILE=REGISTRY SSS FUL L6  
 L10 18911 SEA FILE=REGISTRY ABB=ON PLU=ON L8 AND (B4 OR B5 OR B6 OR B7  
 OR B8 OR B1 OR B2)/PG  
 L11 4906 SEA FILE=REGISTRY ABB=ON PLU=ON L8 AND B8/PG  
 L14 STR



N $\times$ X  
 @18 19

N $\times$ C  
 @20 21

VAR G1=O/S/SE/P/N/11/12

VAR G2=CH/14/16

VAR G3=CH/14/16

VAR G4=CH/14/16

VAR G5=CH/14/16

VAR G6=NH/18/20

## NODE ATTRIBUTES:

NSPEC IS RC AT 15  
 NSPEC IS RC AT 17  
 NSPEC IS RC AT 19  
 NSPEC IS RC AT 21  
 DEFAULT MLEVEL IS ATOM  
 MLEVEL IS CLASS AT 7 10  
 DEFAULT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 21

## STEREO ATTRIBUTES: NONE

L16 7180 SEA FILE=REGISTRY SUB=L8 SSS FUL L14  
 L17 2217 SEA FILE=REGISTRY ABB=ON PLU=ON L16 AND L11  
 L20 628 SEA FILE=HCAPLUS ABB=ON PLU=ON L17  
 L21 6 SEA FILE=HCAPLUS ABB=ON PLU=ON L17 (L) CAT/RL  
 L22 11 SEA FILE=HCAPLUS ABB=ON PLU=ON L17 (L) ?CATALY?  
 L23 26 SEA FILE=HCAPLUS ABB=ON PLU=ON L17 (L) ?POLYMER?  
 L24 35 SEA FILE=HCAPLUS ABB=ON PLU=ON (L21 OR L22 OR L23)  
 L25 10 SEA FILE=HCAPLUS ABB=ON PLU=ON L20 AND (POLYMER?)/SC, SX  
 L26 41 SEA FILE=HCAPLUS ABB=ON PLU=ON (L24 OR L25)  
 L27 6858 SEA FILE=REGISTRY ABB=ON PLU=ON L16 AND L10  
 L28 4641 SEA FILE=REGISTRY ABB=ON PLU=ON L27 NOT L17  
 L30 7 SEA FILE=HCAPLUS ABB=ON PLU=ON L28 (L) CAT/RL  
 L31 70 SEA FILE=HCAPLUS ABB=ON PLU=ON L28 (L) ?POLYMER?  
 L32 10 SEA FILE=HCAPLUS ABB=ON PLU=ON L28 (L) ?CATALY?  
 L33 78 SEA FILE=HCAPLUS ABB=ON PLU=ON (L30 OR L31 OR L32)  
 L34 71 SEA FILE=HCAPLUS ABB=ON PLU=ON L33 NOT L26  
 L35 26 SEA FILE=HCAPLUS ABB=ON PLU=ON L34 AND POLYMER?/SC, SX  
 L36 67 SEA FILE=HCAPLUS ABB=ON PLU=ON L35 OR L26  
 L41 59 SEA FILE=HCAPLUS ABB=ON PLU=ON L36 AND ?POLYMER?  
 L42 10 SEA FILE=HCAPLUS ABB=ON PLU=ON L41 AND ?CATALY?  
 L43 59 SEA FILE=HCAPLUS ABB=ON PLU=ON (L41 OR L42)

=&gt; d his l48

(FILE 'USPATFULL, USPAT2, CAOLD, TOXCENTER, CASREACT' ENTERED AT 13:57:12  
 ON 27 JUL 2005)

L48 26 S L46 AND L47

=&gt; d que nos 148

L6 STR  
 L8 19568 SEA FILE=REGISTRY SSS FUL L6  
 L11 4906 SEA FILE=REGISTRY ABB=ON PLU=ON L8 AND B8/PG.  
 L14 STR  
 L16 7180 SEA FILE=REGISTRY SUB=L8 SSS FUL L14  
 L17 2217 SEA FILE=REGISTRY ABB=ON PLU=ON L16 AND L11  
 L44 201 SEA L17  
 L45 188 DUP REM L44 (13 DUPLICATES REMOVED)  
 L46 32 SEA L45 AND ?CATALY?/BI, IT, ST, CC, CT  
 L47 81 SEA L45 AND ?POLYMER?/BI, IT, ST, CC, CT  
 L48 26 SEA L46 AND L47

=&gt; d que nos 153

L6 STR  
L8 19568 SEA FILE=REGISTRY SSS FUL L6  
L11 4906 SEA FILE=REGISTRY ABB=ON PLU=ON L8 AND B8/PG  
L14 STR  
L16 7180 SEA FILE=REGISTRY SUB=L8 SSS FUL L14  
L17 2217 SEA FILE=REGISTRY ABB=ON PLU=ON L16 AND L11  
L49 0 SEA FILE=REGISTRY ABB=ON PLU=ON L17 AND MEDLINE/LC  
L50 0 SEA FILE=REGISTRY ABB=ON PLU=ON L17 AND BIOSIS/LC  
L51 0 SEA FILE=REGISTRY ABB=ON PLU=ON L17 AND EMBASE/LC  
L52 0 SEA FILE=REGISTRY ABB=ON PLU=ON L17 AND CANCERLIT/LC  
L53 0 SEA FILE=REGISTRY ABB=ON PLU=ON (L49 OR L50 OR L51 OR L52)

=> d his 160

(FILE 'PASCAL, JICST-EPLUS, SCISEARCH, APOLLIT' ENTERED AT 14:09:19 ON 27 JUL 2005)  
L60 10 DUP REM L59 (6 DUPLICATES REMOVED)

=> d que nos 160

L54 QUE ABB=ON PLU=ON NICKEL OR NI OR PALLADIUM OR PD OR P  
LATINUM OR PT  
L55 148 SEA L54 (5A) AZO  
L56 43 SEA ((TRANSITION OR (D(1W) BLOCK)) (2A) (METAL OR ELEMENT))  
(5A) AZO  
L57 9 SEA (L55 OR L56) (10A) ?CATALY?  
L58 7 SEA (L55 OR L56) (10A) ?POLYMER?  
L59 16 SEA (L57 OR L58)  
L60 10 DUP REM L59 (6 DUPLICATES REMOVED)

=> d que 178

L61 3995 SEA FILE=WPIX ABB=ON PLU=ON ((K531 OR K534) (P) (A42? OR  
A430 OR A500 OR A54? OR A600 OR A67?)/M0,M1,M2,M3,M4,M5,M6  
L62 1350 SEA FILE=WPIX ABB=ON PLU=ON C09B045?/IPC  
L63 986 SEA FILE=WPIX ABB=ON PLU=ON L61 AND L62  
L65 1642 SEA FILE=WPIX ABB=ON PLU=ON B01J031-12/IPC  
L66 12140 SEA FILE=WPIX ABB=ON PLU=ON A02-A06/MC  
L67 1 SEA FILE=WPIX ABB=ON PLU=ON L63 AND (L65 OR L66)  
L68 2016 SEA FILE=WPIX ABB=ON PLU=ON (NICKEL/BIX OR NI/BIX OR  
PALLADIUM/BIX OR PD/BIX OR PLATINUM/BIX OR PT/BIX) (10A)  
AZO?/BIX  
L74 30 SEA FILE=WPIX ABB=ON PLU=ON (((TRANSITION OR (D(1W) BLOCK))  
(2A) (METAL OR ELEMENT)) (5A) AZO)/BIX  
L75 54 SEA FILE=WPIX ABB=ON PLU=ON (L68 OR L74) AND L63  
L76 12 SEA FILE=WPIX ABB=ON PLU=ON L75 AND (?CATALY? OR ?POLYMER?) /B  
IX  
L78 12 SEA FILE=WPIX ABB=ON PLU=ON L67 OR L76

=> dup rem 143 148 160 178

DUPLICATE IS NOT AVAILABLE IN 'CAOLD'.

ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE

FILE 'HCAPLUS' ENTERED AT 15:26:08 ON 27 JUL 2005

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FILE 'WPIX' ENTERED AT 15:26:08 ON 27 JUL 2005  
COPYRIGHT (C) 2005 THE THOMSON CORPORATION  
PROCESSING COMPLETED FOR L43  
PROCESSING COMPLETED FOR L48  
PROCESSING COMPLETED FOR L60  
PROCESSING COMPLETED FOR L78  
L84 105 DUP REM L43-L48-L60-L78 (2 DUPLICATES REMOVED)  
ANSWERS '1-59' FROM FILE HCAPLUS  
ANSWERS '60-84' FROM FILE USPATFULL  
ANSWERS '85-90' FROM FILE PASCAL  
ANSWER '91' FROM FILE JICST-EPLUS  
ANSWERS '92-94' FROM FILE SCISEARCH  
ANSWERS '95-105' FROM FILE WPIX

=> file stnguide  
FILE 'STNGUIDE' ENTERED AT 15:26:33 ON 27 JUL 2005  
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AND TECHNOLOGY CORPORATION, AND FACHINFORMATIONSZENTRUM KARLSRUHE

FILE CONTAINS CURRENT INFORMATION.  
LAST RELOADED: Jul 22, 2005 (20050722/UP).

=> d ibib ed ab hitstr

YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, USPATFULL, PASCAL, JICST-EPLUS,  
SCISEARCH, WPIX' - CONTINUE? (Y)/N:y

L84 ANSWER 1 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1  
 ACCESSION NUMBER: 2004:995796 HCAPLUS  
 DOCUMENT NUMBER: 141:411408  
 TITLE: Metal complexes as olefin polymerization catalyst system  
 INVENTOR(S): Hinkle, Paul Veinbergs; Rix, Francis Charles  
 PATENT ASSIGNEE(S): USA  
 SOURCE: U.S. Pat. Appl. Publ., 44 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004230015	A1	20041118	US 2003-436741	20030513
WO 2004101576	A1	20041125	WO 2004-US10597	20040407
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
WO 2004101634	A1	20041125	WO 2004-US15277	20040513
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2004260043	A1	20041223	US 2004-844683	20040513
PRIORITY APPLN. INFO.:			US 2003-436741	A 20030513

OTHER SOURCE(S): MARPAT 141:411408

ED Entered STN: 19 Nov 2004

AB This invention relates to a compound ( $L_0$ ) $a$  $M(L_1)b(L_2)c$  ( $M$  = groups 3-11 of the periodic table;  $L_1$  = formal anionic ligand;  $L_2$  = formal neutral ligand,  $a \geq 1$ ;  $b \geq 0$ ;  $c \geq 1$ ;  $L_0$  =  $RN:EA_rO$  provided  $R$  = optionally substituted Ph group bearing an O- group adjacent to N (with a proviso);  $E$  = N, P; Ar 0 = arene). This invention further relates to a process to oligomerize and/or polymerize unsatd. monomers using the above compns., optionally combined with an activator.

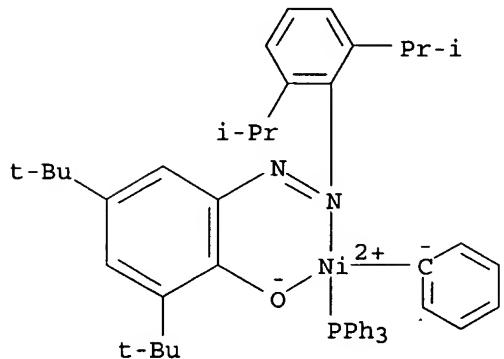
IT 732285-99-3P 793687-74-8P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT

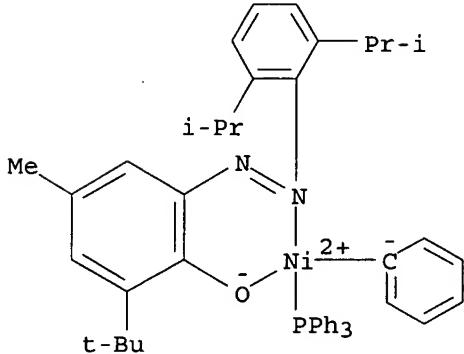
(Reactant or reagent)

(manufacture and use of bidentate E-phenoxide type transition metal complexes as olefin polymerization catalyst system)

RN 732285-99-3 HCPLUS

CN Nickel, [2-[[2,6-bis(1-methylethyl)phenyl]azo- $\kappa$ N2]-4,6-bis(1,1-dimethylethyl)phenolato- $\kappa$ O]phenyl(triphenylphosphine)- (9CI) (CA INDEX NAME)

RN 793687-74-8 HCPLUS

CN Nickel, [2-[[2,6-bis(1-methylethyl)phenyl]azo- $\kappa$ N2]-6-(1,1-dimethylethyl)-4-methylphenolato- $\kappa$ O]phenyl(triphenylphosphine)- (9CI) (CA INDEX NAME)

=&gt; d ibib ed ab hitstr 2-59

YOU HAVE REQUESTED DATA FROM FILE 'HCPLUS, USPATFULL, PASCAL, JICST-EPLUS, SCISEARCH, WPIX' - CONTINUE? (Y)/N:y

L84 ANSWER 2 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2

ACCESSION NUMBER: 2004:631256 HCPLUS

DOCUMENT NUMBER: 141:174614

TITLE: Monometallic azo complexes of late transition metals  
for the polymerization of olefins

INVENTOR(S): Weiss, Thomas

PATENT ASSIGNEE(S): Bayer AG, Germany

SOURCE: Ger. Offen., 25 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10304158	A1	20040805	DE 2003-10304158	20030203
EP 1454926	A1	20040908	EP 2004-1164	20040121
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CA 2456518	AA	20040803	CA 2004-2456518	20040130
US 2004186007	A1	20040923	US 2004-768291	20040130
JP 2004238395	A2	20040826	JP 2004-25253	20040202
PRIORITY APPLN. INFO.:			DE 2003-10304158	A 20030203

OTHER SOURCE(S): MARPAT 141:174614

ED Entered STN: 06 Aug 2004

AB The title azo complexes have the formula I, where Nul = O, S, Se, PRa, NRA or COO; Ra = H, alkyl or aryl group; R, R1, R2, R3 and R4 = H, halogen, substituted or unsubstituted C1-8 alkyl, C2-8 alkenyl, C3-12 cycloalkyl, C7-13 arylalkyl or C6-14 aryl group; M1 = a group 4-12 element, such as Ti, Zr, Cr, V, Fe, Co, Ni, Pd, Cu or Zn; L1 = a neutral ligand, such as PPh<sub>3</sub>; L2 = an anionic ligand, such as Me, Ph and z = 1-2. The complexes can be used as catalysts for (co)polymerization of olefins and polar olefins.

IT 732285-98-2P 732285-99-3P 732286-00-9P  
732286-01-0P 732286-02-1P 732286-03-2P

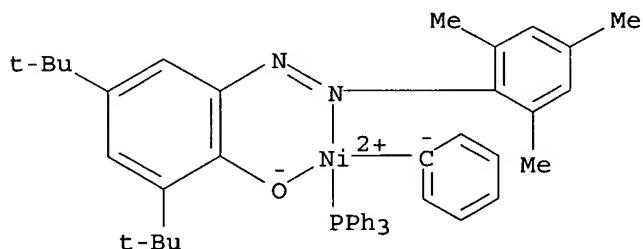
732286-04-3P

RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)

(preparation of monometallic azo complexes of late transition metals for the polymerization of olefins)

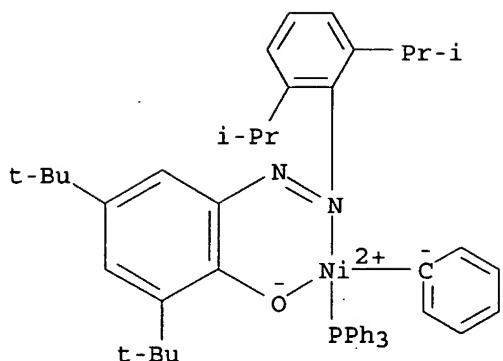
RN 732285-98-2 HCPLUS

CN Nickel, [2,4-bis(1,1-dimethylethyl)-6-[(2,4,6-trimethylphenyl)azo-  
κN2]phenolato-κO]phenyl(triphenylphosphine)- (9CI) (CA INDEX  
NAME)

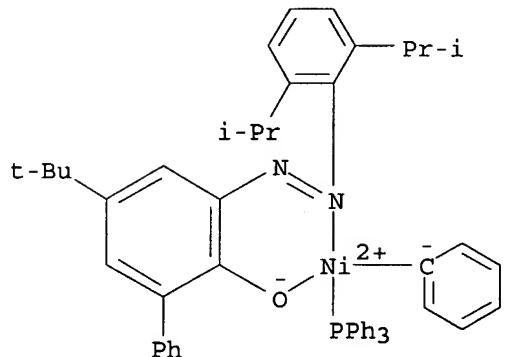


RN 732285-99-3 HCPLUS

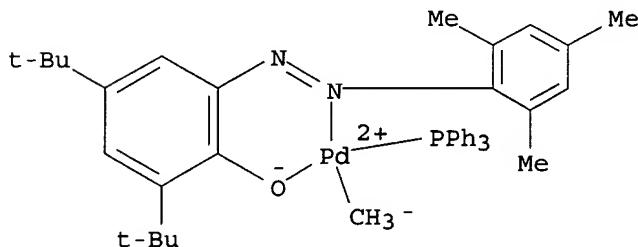
CN Nickel, [2-[[2,6-bis(1-methylethyl)phenyl]azo-κN₂]-4,6-bis(1,1-dimethylethyl)phenolato-κO]phenyl(triphenylphosphine)- (9CI) (CA INDEX NAME)



RN 732286-00-9 HCAPLUS

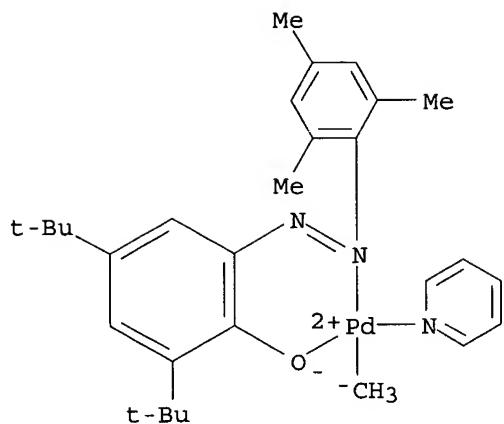
CN Nickel, [3-[[2,6-bis(1-methylethyl)phenyl]azo- $\kappa$ N2]-5-(1,1-dimethylethyl)[1,1'-bi phenyl]-2-olato- $\kappa$ O]phenyl(triphenylphosphine)-(9CI) (CA INDEX NAME)

RN 732286-01-0 HCAPLUS

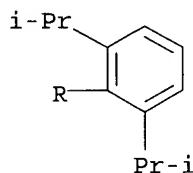
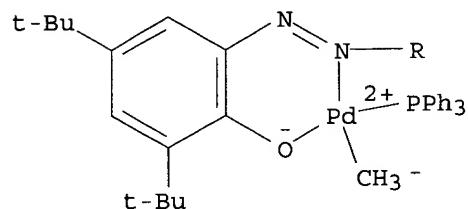
CN Palladium, [2,4-bis(1,1-dimethylethyl)-6-[(2,4,6-trimethylphenyl)azo- $\kappa$ N2]phenolato- $\kappa$ O]methyl(triphenylphosphine)-(9CI) (CA INDEX NAME)

RN 732286-02-1 HCAPLUS

CN Palladium, [2,4-bis(1,1-dimethylethyl)-6-[(2,4,6-trimethylphenyl)azo- $\kappa$ N2]phenolato- $\kappa$ O)methyl(pyridine)-(9CI) (CA INDEX NAME)

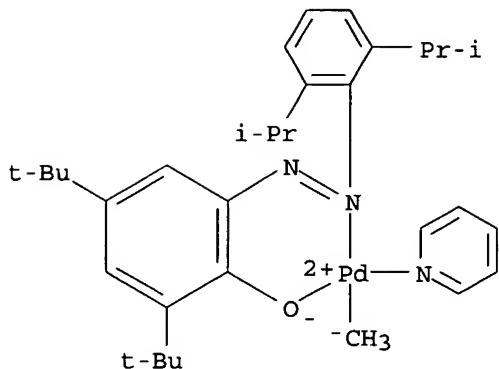


RN 732286-03-2 HCAPLUS

CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo- $\kappa$ N2]-4,6-bis(1,1-dimethylethyl)phenolato- $\kappa$ O]methyl(triphenylphosphine)- (9CI) (CA INDEX NAME)

RN 732286-04-3 HCAPLUS

CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo- $\kappa$ N2]-4,6-bis(1,1-dimethylethyl)phenolato- $\kappa$ O]methyl(pyridine)- (9CI) (CA INDEX NAME)



L84 ANSWER 3 OF 105 HCPLUS /COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:17031 HCPLUS

DOCUMENT NUMBER: 142:94311

TITLE: Catalyst for polymerization or copolymerization of olefins, preparation and use of the same

INVENTOR(S): Sun, Xiuli; Hu, Weiqiu; Wang, Cong; Tang, Yong; Zhang, Yuliang; Xia, Chun-An

PATENT ASSIGNEE(S): Peop. Rep.. China

SOURCE: U.S. Pat. Appl. Publ., 44 pp., Cont.-in-part of Appl. No. PCT/CN02/00425.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005004331	A1	20050106	US 2004-761827	20040121
CN 1332182	A	20020123	CN 2001-126323	20010723
CN 1364818	A	20020821	CN 2002-110844	20020209
WO 2003010207	A1	20030206	WO 2002-CN425	20020617
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRIORITY APPLN. INFO.:			CN 2001-126323	A 20010723
			CN 2002-110844	A 20020209
			WO 2002-CN425	A2 20020617

OTHER SOURCE(S): MARPAT 142:94311

ED Entered STN: 09 Jan 2005

AB Catalysts and catalyst systems useful for the olefin polymerization and copolymerization, and their synthesis procedure and usage are disclosed. These catalysts are a kind of novel complexes formed by transition metal from group 3 to group 11 and multidentate ligand, wherein the catalysts have the following formula (I); wherein A, B, D, E, G, and connecting bonds comprise a

tridentate ligand; R1, R2 and R3 each individually represents H or a chemical inert substituted or unsubstituted hydrocarbyl moiety; X represents a weakly coordinating monovalent ligand; d is 0 or 1; q is 0 or 1; m is 1, 2 or 3; and n is 1, 2, 3 or 4 as needed to balance the charge on M.

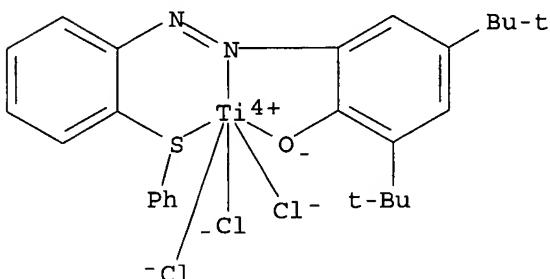
IT 819052-64-7P

RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)

(preparation and use of olefin polymerization catalyst based on transition metal complexes with multidentate ligands)

RN 819052-64-7 HCAPLUS

CN Titanium, [2,4-bis(1,1-dimethylethyl)-6-[[2-(phenylthio- $\kappa$ S)phenyl]azo- $\kappa$ N1]phenolato- $\kappa$ O]trichloro- (9CI) (CA INDEX NAME)



L84 ANSWER 4 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:64316 HCAPLUS

DOCUMENT NUMBER: 142:336672

TITLE: Insertion of Acrylonitrile into Palladium Methyl Bonds  
in Neutral and Anionic Pd(II) Complexes

AUTHOR(S): Groux, Laurent F.; Weiss, Thomas; Reddy, Dastigiri N.; Chase, Preston A.; Piers, Warren E.; Ziegler, Tom; Parvez, Masood; Benet-Buchholz, Jordi

CORPORATE SOURCE: Department of Chemistry, University of Calgary,  
Calgary, AB, T2N 1N4, Can.

SOURCE: Journal of the American Chemical Society (2005),  
127(6), 1854-1869

CODEN: JACSAT; ISSN: 0002-7863

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 25 Jan 2005

AB The reactions of a series of Pd(II) Me compds. of general formula LPd(NCCH<sub>3</sub>)CH<sub>3</sub>, where L is a bulky phenoxydiazeno or phenoxyaldimine ligand with the polar olefin acrylonitrile (AN), are reported. The compds. react with an excess of AN to give the products of 2,1 insertion into the Pd-Me bond, yielding dimers and/or trimers which feature bridging  $\alpha$ -cyano groups. The reactions were studied by low temperature <sup>1</sup>H NMR spectroscopy, revealing an initial formation of compds. featuring N-bound AN, which isomerized to an (unobserved)  $\pi$ -bound species that rapidly underwent 2,1 insertion into the Pd-Me bond. Intermediate oligomeric complexes retaining a Pd-Me function were observed at low [AN] in these reactions. Under pseudo first-order conditions, k<sub>obs</sub> values of 8.5 + 10<sup>-5</sup> to 2.68 + 10<sup>-3</sup> M<sup>-1</sup> (-22 °C to 10 °C, 100 equiv of AN) and activation parameters of  $\Delta H_{\text{dbldag.}} = 14.4(5)$  kcal mol<sup>-1</sup> and  $\Delta S_{\text{dbldag.}} = -19(5)$  eu were obtained in one case. Comparison of the overall rates of insertion between two LPd(NCCH<sub>3</sub>)CH<sub>3</sub>, differing in the

overall charge on the supporting ligand L, showed that the complex bearing a neg. charged ligand reacts with AN twice as fast as one with no anionic charge. The rates of insertion in both of these complexes are significantly faster than reported rates for analogous reactions in cationic Pd(II) derivs., indicating that increasing the neg. charge on the complex enhances the rate of AN insertion. These results provide fundamental mechanistic insights into a crucial reaction for incorporation of polar comonomers into alpha olefins via a coordination polymn mechanism.

IT

**848395-10-8P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

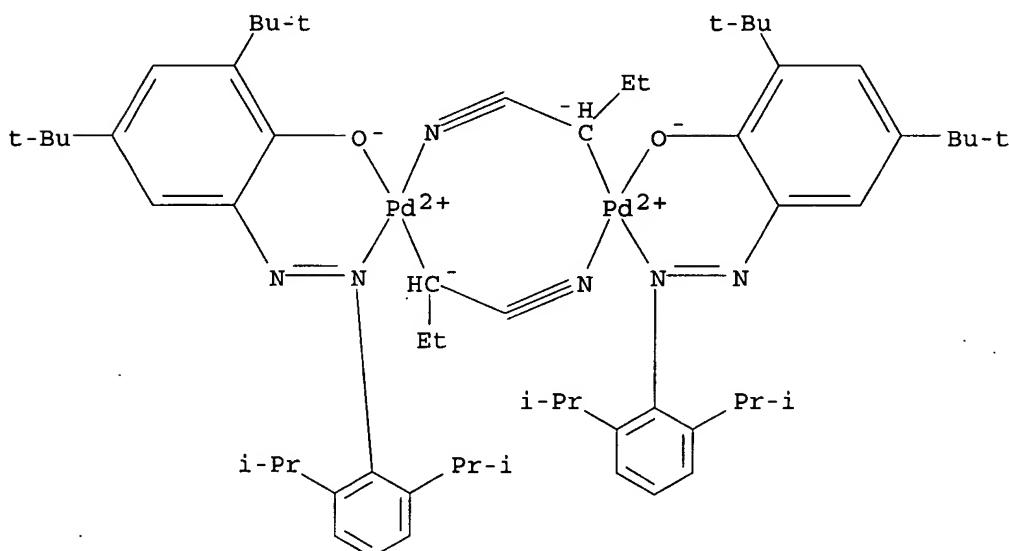
(acrylonitrile insertion dimer; insertion of acrylonitrile into Pd-Me bonds in neutral and anionic Pd(II) complexes)

RN

848395-10-8 HCPLUS

CN

INDEX NAME NOT YET ASSIGNED



IT

**848395-11-9P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

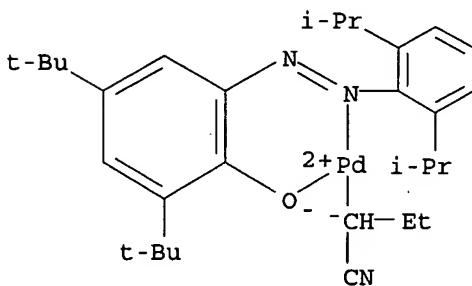
(acrylonitrile insertion monomer; insertion of acrylonitrile into Pd-Me bonds in neutral and anionic Pd(II) complexes)

RN

848395-11-9 HCPLUS

CN

INDEX NAME NOT YET ASSIGNED



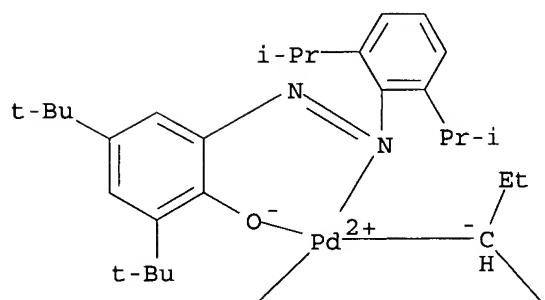
IT **847908-24-1P**

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(acrylonitrile insertion trimer; insertion of acrylonitrile into Pd-Me bonds in neutral and anionic Pd(II) complexes)

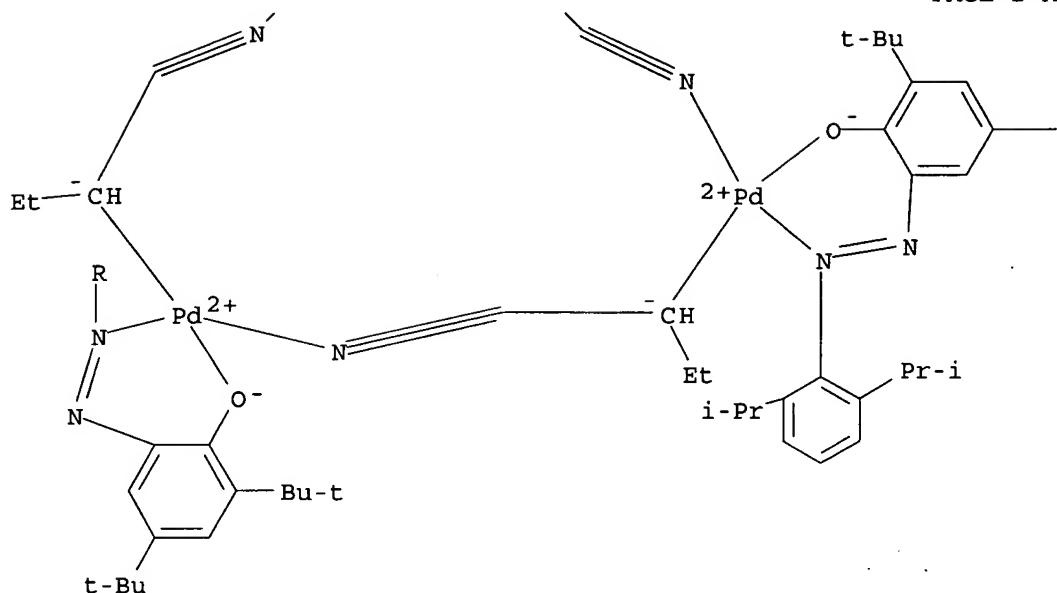
RN 847908-24-1 HCPLUS

CN INDEX NAME NOT YET ASSIGNED

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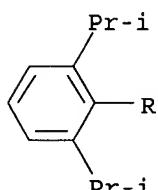
PAGE 2-A



PAGE 2-B

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PAGE 3-A

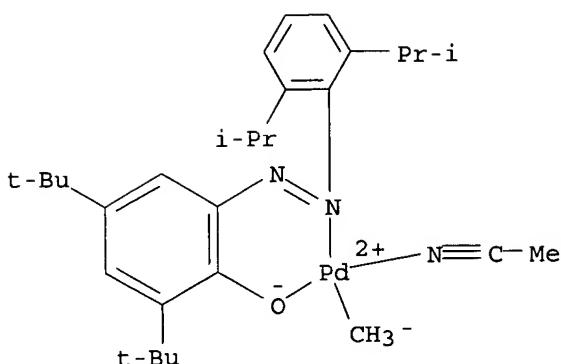


IT 848394-97-8P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(insertion of acrylonitrile into Pd-Me bonds in neutral and anionic  
Pd(II) complexes)

RN 848394-97-8 HCPLUS

CN INDEX NAME NOT YET ASSIGNED

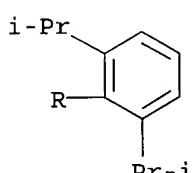
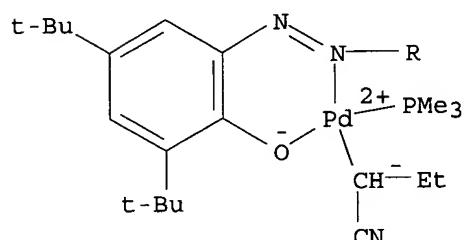


IT 848395-12-0P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(insertion of acrylonitrile into Pd-Me bonds in neutral and anionic  
Pd(II) complexes)

RN 848395-12-0 HCAPLUS

CN INDEX NAME NOT YET ASSIGNED



REFERENCE COUNT:

94

THERE ARE 94 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L84 ANSWER 5 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:128437 HCAPLUS

DOCUMENT NUMBER: 142:392510

TITLE: The Exploration of Neutral Azoligand-Based Grubbs Type Palladium(II) Complex as Potential Catalyst for the Copolymerization of Ethylene with Acrylonitrile: A Theoretical Study Based on Density Functional Theory

AUTHOR(S): Yang, Sheng-Yong; Szabo, Miklos J.; Michalak, Artur; Weiss, Thomas; Piers, Warren E.; Jordan, Richard F.; Ziegler, Tom

CORPORATE SOURCE: Department of Chemistry, University of Calgary, Calgary, AB, T2N 1N4, Can.

SOURCE: Organometallics (2005), 24(6), 1242-1251

CODEN: ORGND7; ISSN: 0276-7333

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 15 Feb 2005

AB A combined quantum-mech. (QM) and mol.-mech. (MM) method was used to explore the potential of neutral azoligand-based Grubbs type Pd(II) complexes as catalysts for ethylene-acrylonitrile copolymer. The 1st part of the study includes complexation of the monomers to the catalyst, the 1st insertion step, and isomerization of the 1st insertion product I. The  $\pi$ -complexation energies of acrylonitrile and ethylene are comparable, but the acrylonitrile insertion has a lower barrier over ethylene insertion by 5 kcal/mol in the 1st step. The leading product I might conduct isomerizations with a lower barrier to form different chelate structures. However, the most stable isomers have the CN group in the  $\alpha$ -position. The 2nd part explores the further role of the kinetic insertion product I. I Readily can complex another ethylene or acrylonitrile monomer. Unfortunately, it is even more favorable for I to coordinate its Pd(II) center to a N atom on a  $\alpha$ -cyano-alkyl group of another I complex, leading to inert oligomers of I that do not further react with ethylene or acrylonitrile. Trimers of I are preferred over dimers because they allow for an optimal linear Pd-NC bonding mode with an angle of .apprx.180°. The preference for Pd coordination to the N on a  $\alpha$ -cyano-alkyl group over N-coordination to acrylonitrile stems from the fact that the acrylonitrile N is less electron rich due to donation to the  $\pi^*$  orbital of the olefinic bond.

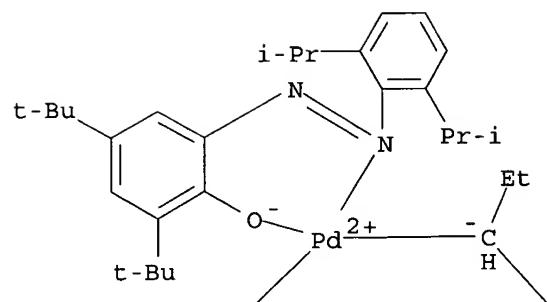
IT 847908-24-1 849937-44-6 849937-45-7  
849937-46-8 849937-47-9 849937-48-0  
849937-49-1 849937-50-4 849937-51-5  
849937-52-6 849937-53-7 849937-54-8  
849937-55-9 849937-56-0 849942-34-3  
849942-35-4 849942-36-5 849942-37-6  
849942-38-7 849942-40-1

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)

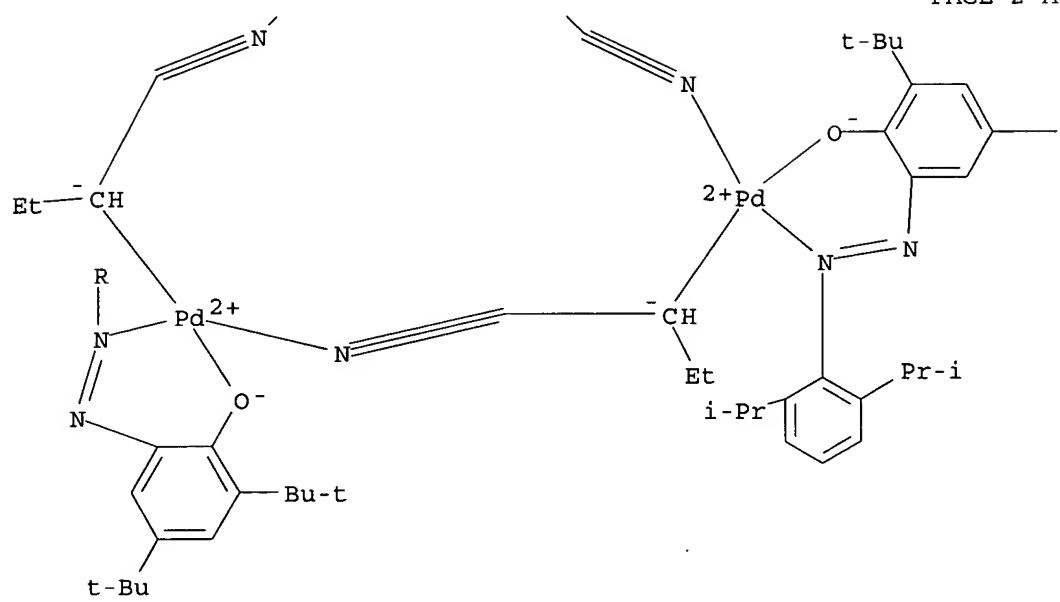
(combined quantum-mech. (QM) and mol.-mech. (MM) of neutral azoligand-based Grubbs type palladium(II) complex as potential catalyst for the copolymer. of ethylene with acrylonitrile)

RN 847908-24-1 HCAPLUS  
CN INDEX NAME NOT YET ASSIGNED

PAGE 1-A



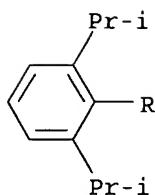
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PAGE 2-B

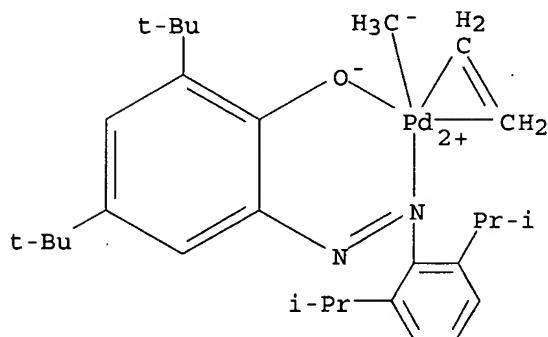
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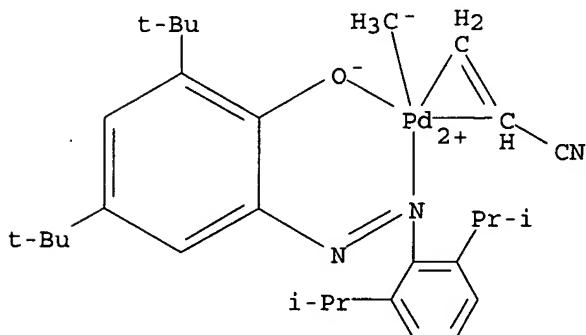
RN 849937-44-6 HCAPLUS

CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo- $\kappa$ N2]-4,6-bis(1,1-dimethylethyl)phenolato- $\kappa$ O] ( $\eta$ 2-ethene)methyl-, stereoisomer  
(9CI) (CA INDEX NAME)



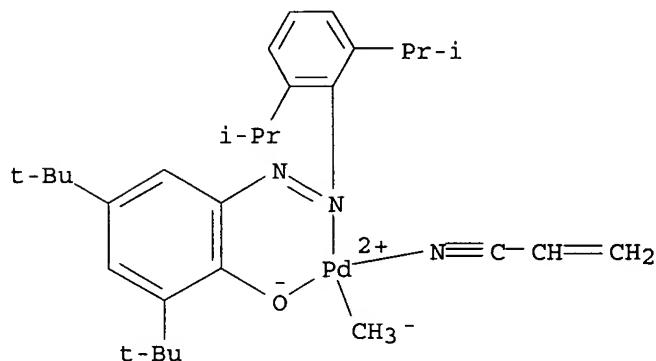
RN 849937-45-7 HCAPLUS

CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo- $\kappa$ N2]-4,6-bis(1,1-dimethylethyl)phenolato- $\kappa$ O]methyl[(2,3- $\eta$ )-2-propenenitrile]-, stereoisomer (9CI) (CA INDEX NAME)



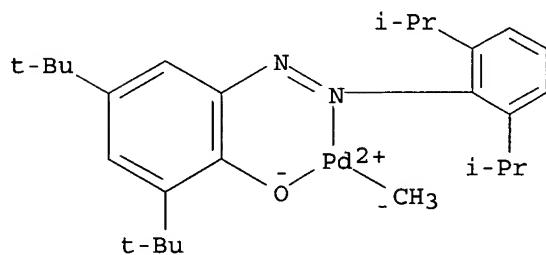
RN 849937-46-8 HCAPLUS

CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo- $\kappa$ N2]-4,6-bis(1,1-dimethylethyl)phenolato- $\kappa$ O]methyl(2-propenenitrile)-, (SP-4-4)-(9CI) (CA INDEX NAME)



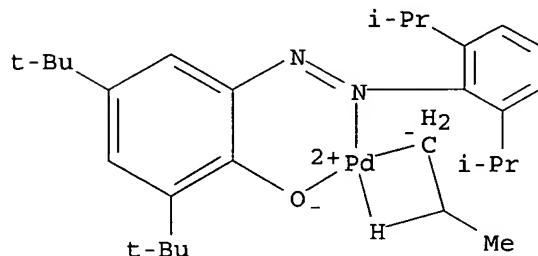
RN 849937-47-9 HCAPLUS

CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo- $\kappa$ N2]-4,6-bis(1,1-dimethylethyl)phenolato- $\kappa$ O]methyl- (9CI) (CA INDEX NAME)



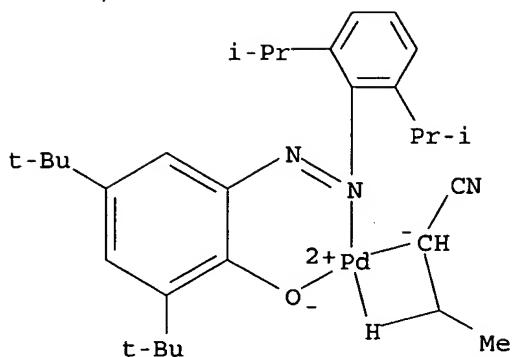
RN 849937-48-0 HCAPLUS

CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo- $\kappa$ N2]-4,6-bis(1,1-dimethylethyl)phenolato- $\kappa$ O](propyl- $\kappa$ C1, $\kappa$ H2)-, (SP-4-4)-(9CI) (CA INDEX NAME)

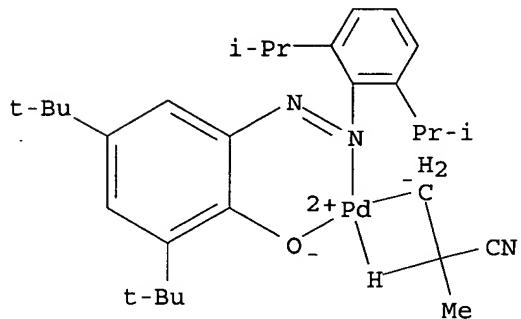


RN 849937-49-1 HCAPLUS

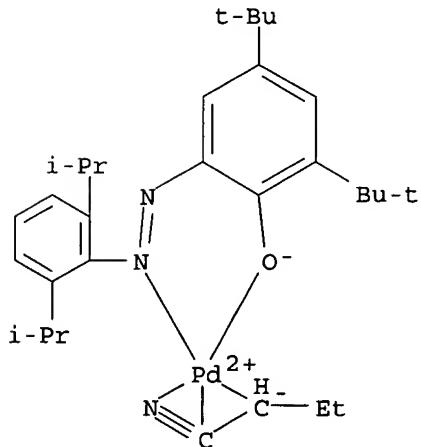
CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo- $\kappa$ N2]-4,6-bis(1,1-dimethylethyl)phenolato- $\kappa$ O][rel-(1R,2S)-1-cyanopropyl- $\kappa$ C1, $\kappa$ H2]-, (SP-4-3)-(9CI) (CA INDEX NAME)



RN 849937-50-4 HCPLUS

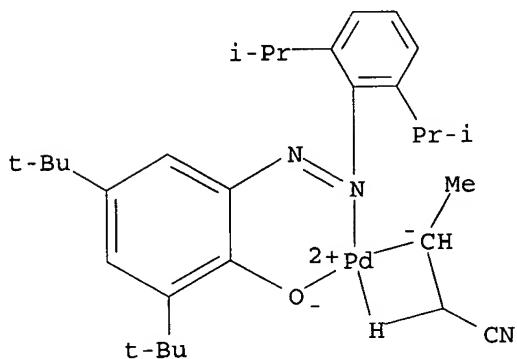
CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo- $\kappa$ N2]-4,6-bis(1,1-dimethylethyl)phenolato- $\kappa$ O] (2-cyanopropyl- $\kappa$ C1, $\kappa$ H2)-, (SP-4-3) - (9CI) (CA INDEX NAME)

RN 849937-51-5 HCPLUS

CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo- $\kappa$ N2]-4,6-bis(1,1-dimethylethyl)phenolato- $\kappa$ O] ( $\eta$ 3-1-cyanopropyl)-, stereoisomer (9CI) (CA INDEX NAME)

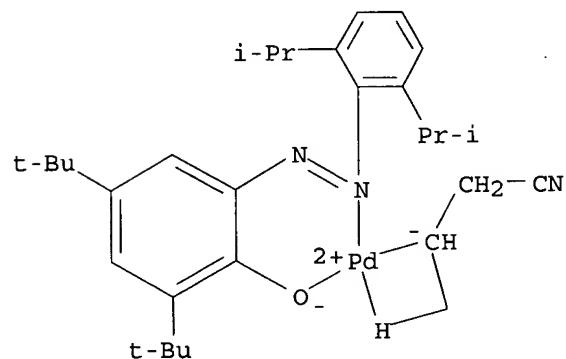
RN 849937-52-6 HCPLUS

CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo- $\kappa$ N2]-4,6-bis(1,1-dimethylethyl)phenolato- $\kappa$ O] [rel-(1R,2R)-2-cyano-1-methylethyl- $\kappa$ C1, $\kappa$ H2]-, (SP-4-3)- (9CI) (CA INDEX NAME)



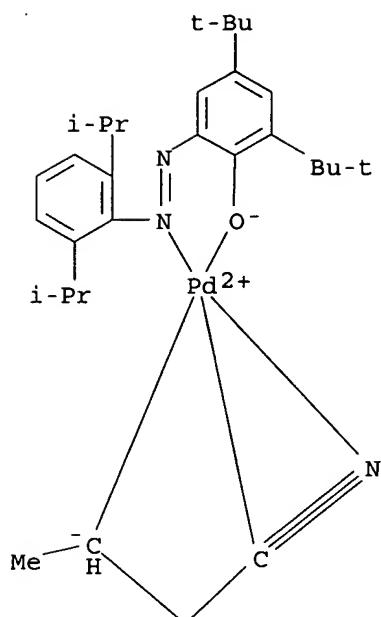
RN 849937-53-7 HCPLUS

CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo- $\kappa$ N2]-4,6-bis(1,1-dimethylethyl)phenolato- $\kappa$ O][2-cyano-1-(methyl- $\kappa$ H)ethyl- $\kappa$ C]-, (SP-4-3)- (9CI) (CA INDEX NAME)



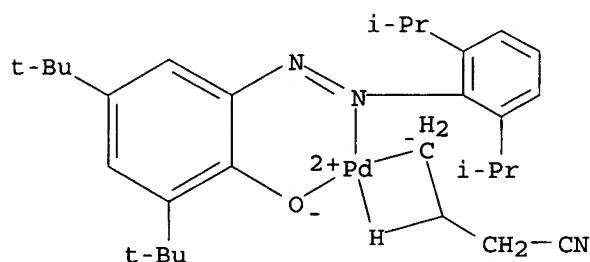
RN 849937-54-8 HCPLUS

CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo- $\kappa$ N2]-4,6-bis(1,1-dimethylethyl)phenolato- $\kappa$ O]( $\eta$ 3-2-cyano-1-methylethyl)-, stereoisomer (9CI) (CA INDEX NAME)



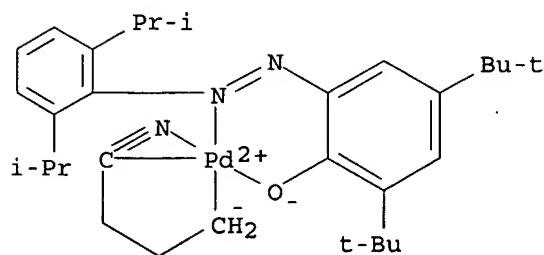
RN 849937-55-9 HCAPLUS

CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo- $\kappa\text{N}_2$ ]-4,6-bis(1,1-dimethylethyl)phenolato- $\kappa\text{O}$ ] (3-cyanopropyl- $\kappa\text{C}_1,\kappa\text{H}_2$ )-, (SP-4-3) - (9CI) (CA INDEX NAME)



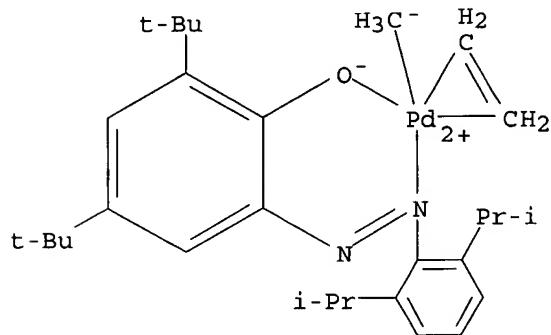
RN 849937-56-0 HCAPLUS

CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo- $\kappa\text{N}_2$ ]-4,6-bis(1,1-dimethylethyl)phenolato- $\kappa\text{O}$ ] ( $\eta^3$ -3-cyanopropyl)-, stereoisomer (9CI) (CA INDEX NAME)



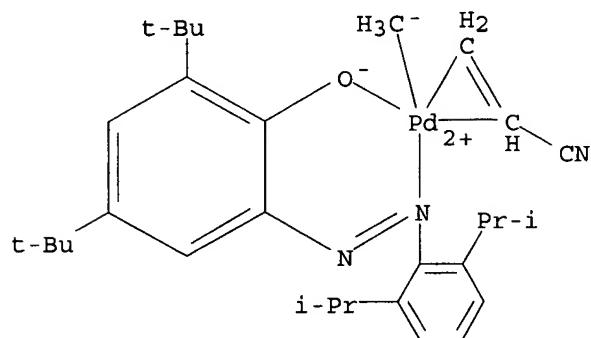
RN 849942-34-3 HCAPLUS

CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo- $\kappa$ N2]-4,6-bis(1,1-dimethylethyl)phenolato- $\kappa$ O] ( $\eta$ 2-ethene)methyl-, stereoisomer  
(9CI) (CA INDEX NAME)



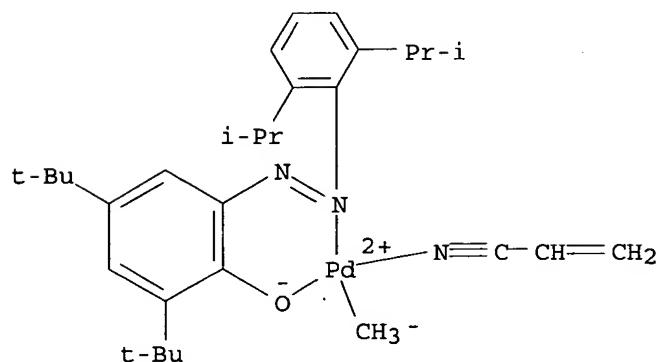
RN 849942-35-4 HCAPLUS

CN Palladium, [2-[2-[2,6-bis(1-methylethyl)phenyl]azo- $\kappa$ N2]-4,6-bis(1,1-dimethylethyl)phenolato- $\kappa$ O]methyl[(2,3- $\eta$ )-2-propenenitrile]-, stereoisomer (9CI) (CA INDEX NAME)



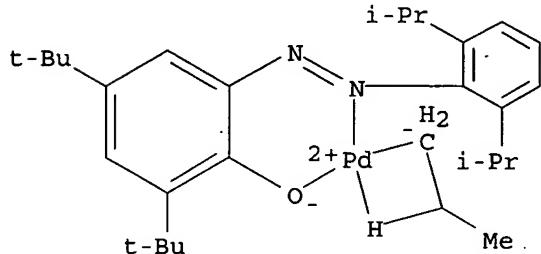
RN 849942-36-5 HCAPLUS

CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo- $\kappa$ N2]-4,6-bis(1,1-dimethylethyl)phenolato- $\kappa$ O]methyl(2-propenenitrile)-, (SP-4-3)- (9CI) (CA INDEX NAME)



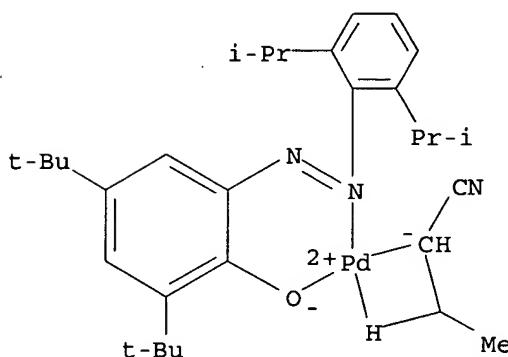
RN 849942-37-6 HCAPLUS

CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo- $\kappa$ N2]-4,6-bis(1,1-dimethylethyl)phenolato- $\kappa$ O] (propyl- $\kappa$ C1, $\kappa$ H2)-, (SP-4-3)-  
(9CI) (CA INDEX NAME)



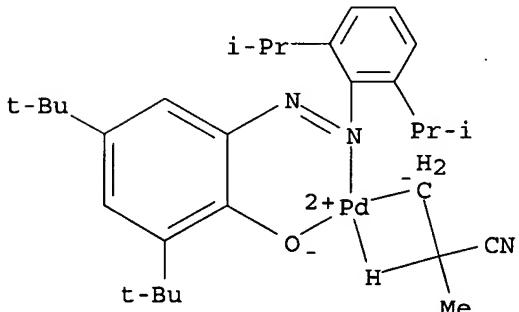
RN 849942-38-7 HCAPLUS

CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo- $\kappa$ N2]-4,6-bis(1,1-dimethylethyl)phenolato- $\kappa$ O] (1-cyanopropyl- $\kappa$ C1, $\kappa$ H2)-, (SP-4-4)- (9CI) (CA INDEX NAME)



RN 849942-40-1 HCAPLUS

CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo- $\kappa$ N2]-4,6-bis(1,1-dimethylethyl)phenolato- $\kappa$ O] (2-cyanopropyl- $\kappa$ C1, $\kappa$ H2)-, (SP-4-4)- (9CI) (CA INDEX NAME)



REFERENCE COUNT:

44

THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L84 ANSWER 6 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004:433377 HCAPLUS  
 DOCUMENT NUMBER: 140:431369  
 TITLE: Electrophotographic toners for high-speed fixing,  
       method for electrophotographic image formation, and  
       electrophotographic apparatus  
 INVENTOR(S): Ogawa, Yoshihiro; Kasuya, Takashige; Yusa, Hiroshi;  
               Iida, Hideto; Yamazaki, Katsuhsisa; Moribe, Shuhei  
 PATENT ASSIGNEE(S): Canon Inc., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 55 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004151441	A2	20040527	JP 2002-317426	20021031
			JP 2002-317426	20021031

PRIORITY APPLN. INFO.:

ED Entered STN: 28 May 2004

AB The toners contain (A) binders including hybrid resins comprising vinyl **polymer** units and polyester units, colorants, and (B) waxes, and are characterized by showing mol. weight distributions of mol. weight <10,000 (M1) 40-70, 10,000-50,000 (M2) 25-50, >50,000 (M3) 2-25, and >100,000 <10 weight% and satisfying M1 ≥ M2 > M3 by gel permeation chromatog. for its THF-soluble components. Preferably, the binders are mixts. of ≥2 kinds of hybrid **polymers**, mixts. of hybrid **polymers** with polyesters or vinyl **polymers**, or mixts. of polyesters and vinyl **polymers**. Optionally, the toners may also contain 0.1-10 weight parts metal compds., per 100 weight parts binder resins. The colorants may be magnetic materials, that are contained in amts. of 30-200 weight parts, per 100 weight part binder resins. Formation of images by electrophotog. and electrophotog. apparatus both using the said toners are also claimed. The toners show excellent low-temperature fixing properties, excellent high-temperature offset characteristics, and prevented curling.

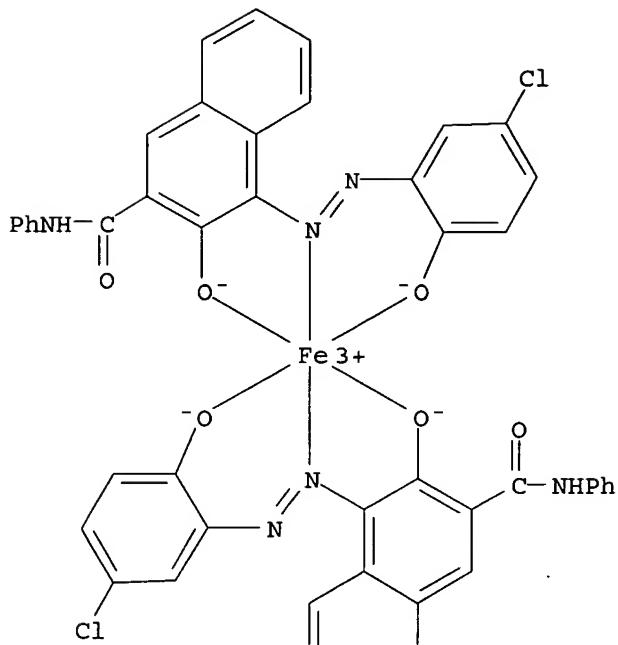
IT 104815-18-1

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (toners containing; electrophotog. toners containing polyester-vinyl **polymer** hybrid binders with controlled mol. wts. and waxes for electrophotog. apparatus)

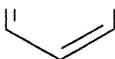
RN 104815-18-1 HCAPLUS

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamido(2-)]-, ammonium (9CI) (CA INDEX NAME)

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● NH<sub>4</sub><sup>+</sup>

L84 ANSWER 7 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2003:527884 HCPLUS  
 DOCUMENT NUMBER: 139:108635  
 TITLE: Black toner containing iron phthalocyanine as colorant  
 INVENTOR(S): Ichikawa, Yasuhiro; Ida, Tetsuya; Sugawara, Nobuyoshi;  
 Komatsu, Nozomu; Hayami, Kazuhiko; Kamitaki, Takaaki  
 PATENT ASSIGNEE(S): Canon Inc., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003195569	A2	20030709	JP 2001-400659	20011228
PRIORITY APPLN. INFO.:			JP 2001-400659	20011228

OTHER SOURCE(S) : MARPAT 139:108635

ED Entered STN: 10 Jul 2003

AB The black toner comprises a binder resin, a wax, and a colorant, wherein the storage elastic modulus at 80° and the loss tangent at 140° of the toner are 1 + 106 - 1 + 108 (dN/m<sup>2</sup>) and 0.2-1.5, resp., and the toner contains an Fe phthalocyanine complex I (X = electron-withdrawing group; and n = 1-6) 2-20 weight parts and a wax 0.5-10 weight parts on the basis of 100 weight parts of the binder resin. In addition,

the toner may contain an Al compound of an aromatic carboxylic acid derivative as a

charge controller. The binder resin may include a polyester resin, a hybrid resin having a polyester unit and a vinyl unit, a mixture of the hybrid resin and a vinyl copolymer, or a mixture of the hybrid resin and the polyester resin. The black toner exhibited blocking resistance and storage stability.

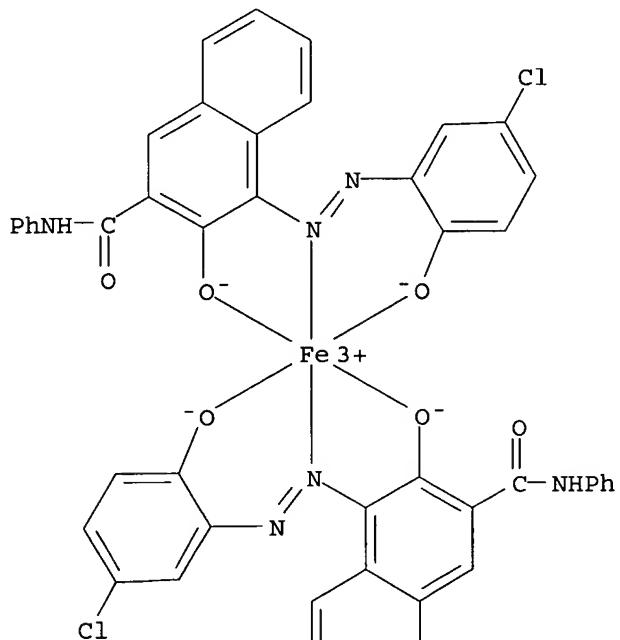
IT 104815-18-1

RL: TEM (Technical or engineered material use); USES (Uses)  
(charge controller; black toner containing iron phthalocyanine and charge controller)

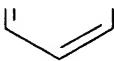
RN 104815-18-1 HCPLUS

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-3-(hydroxy- $\kappa$ O)-N-phenyl-2-naphthalenecarboxamido(2-)]-, ammonium (9CI) (CA INDEX NAME)

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● NH<sub>4</sub><sup>+</sup>

L84 / ANSWER 8 OF 105 HCAPLUS/ COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2003:69159 HCAPLUS  
 DOCUMENT NUMBER: 138:145023  
 TITLE: Toner for non-magnetic one-component development  
 printing mode and method for image formation using the  
 same  
 INVENTOR(S): Nakamura, Masanobu; Sato, Yoshihiro  
 PATENT ASSIGNEE(S): Dainippon Ink and Chemicals, Inc., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2003029455	A2	20030129	JP 2001-210687	20010711
PRIORITY APPLN. INFO.:*			JP 2001-210687	, 20010711

OTHER SOURCE(S): MARPAT 138:145023

ED Entered STN: 29 Jan 2003

AB The title toner contains a binder resin, a colorant, and a charging agent, wherein the binder resin is a polyester made of: polybasic acid, acid anhydride, or ester; and aliphatic polyalc. excluding I( R1-2 = ethylene, propylene; m,n = 0-7 integer; m+n≤7) and wherein the charge-controlling agent is compound II( X1-2 = H, lower alkyl, lower alkoxy, nitro, halo; m, m' = 1-3 integer; R1,3 = H, C1-18 alkyl, alkenyl, sulfonamide, etc.; R2,4 = H, nitro; A+ = ammonium, H, Na, K, mixed cation thereof). The toner provides good characteristics on fixing, offset, and charging.

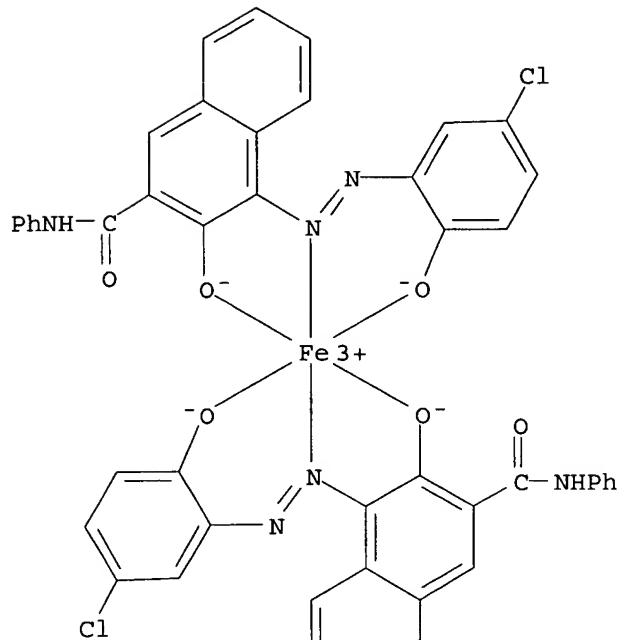
IT 167548-21-2 191113-15-2 197526-67-3D, ammonium  
 or alkaline salts

RL: TEM (Technical or engineered material use); USES (Uses)  
 (charge-controlling agent; toner for non-magnetic one-component  
 development mode and method for image formation using the same)

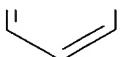
RN 167548-21-2 HCAPLUS

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-3-(hydroxy- $\kappa$ O)-N-phenyl-2-naphthalenecarboxamidato(2-)]- (9CI) (CA  
 INDEX NAME)

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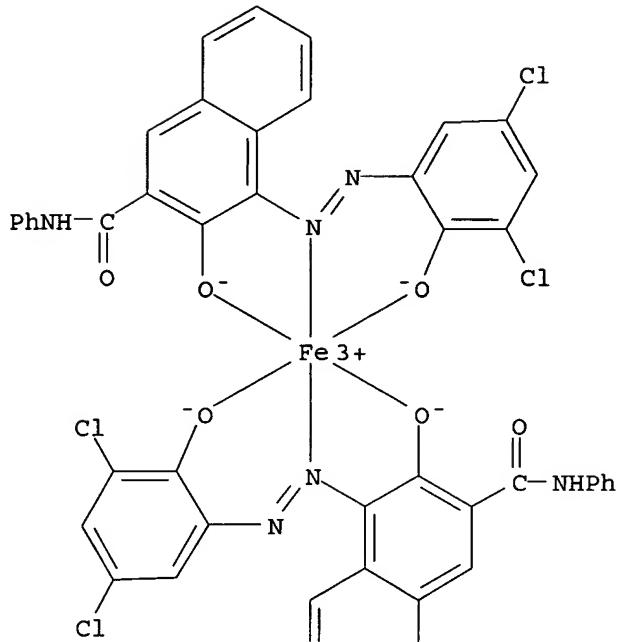


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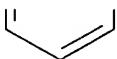


RN 191113-15-2 HCPLUS  
CN Ferrate(1-), bis[4-[3,5-dichloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-3-(hydroxy- $\kappa$ O)-N-phenyl-2-naphthalenecarboxamido(2-)]-(9CI) (CA INDEX NAME)

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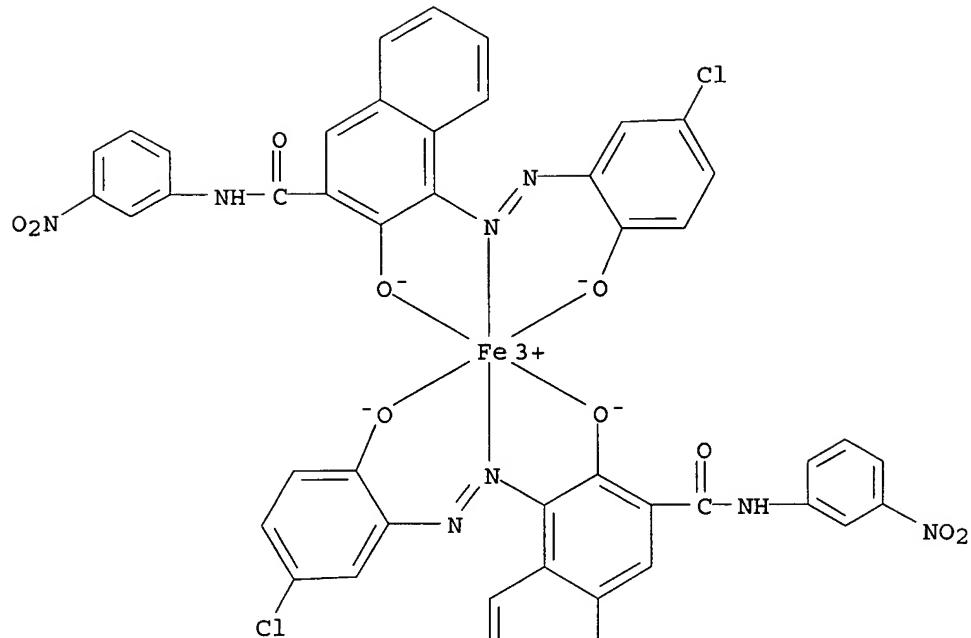
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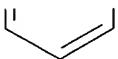
RN 197526-67-3 HCAPLUS

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-3-(hydroxy- $\kappa$ O)-N-(3-nitrophenyl)-2-naphthalenecarboxamido(2-)]- (9CI) (CA INDEX NAME)

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L84 ANSWER 9 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:40287 HCAPLUS

DOCUMENT NUMBER: 138:115005

TITLE: Toners containing specific organic monoazo iron compound and specific binder resin

INVENTOR(S): Iida, Hideto; Kasuya, Takashige; Yusa, Hiroshi; Ogawa, Yoshihiro; Yamazaki, Katsuhisa; Moribe, Shuhei; Tanigawa, Hirohide

PATENT ASSIGNEE(S): Canon Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 36 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003015364	A2	20030117	JP 2001-196519	20010628
PRIORITY APPLN. INFO.:			JP 2001-196519	20010628

ED Entered STN: 17 Jan 2003

AB The title toner contains a binder resin, a colorant, and an organic monoazo iron compound as a charge-control agent, wherein the organic monoazo iron

compound contains an organic monoazo portion having alkyl or carbamoyl substituent and 2 OH groups and wherein the binder resin is chosen from: a mixture of vinyl resin which has repeating unit derived from acrylic acid or methacrylic acid and has 1-100 mg·KOH/g acid value and a vinyl resin having glycidyl group; vinyl resin which has repeating unit derived from acrylic acid or methacrylic acid of 1-100 mg·KOH/g acid value and glycidyl group; and a vinyl resin prepared from the reactions of acrylic acid or methacrylic acid groups and glycidyl groups. The toner provides low temperature image-fixing and good offset resistance, long service-life, and good storageability.

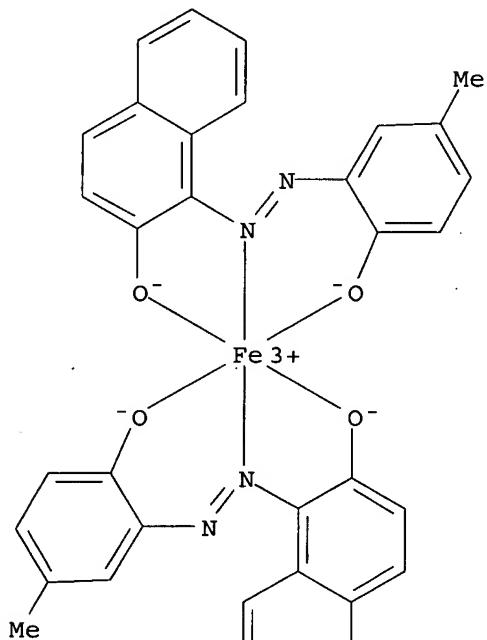
IT 168766-39-0P 268728-80-9P 337369-22-9P  
337369-34-3P 337369-39-8P 486405-71-4P  
486405-72-5P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(organic monoazo iron compound; toners containing specific organic metal compound and  
specific binder resin)

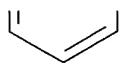
RN 168766-39-0 HCAPLUS

CN Ferrate(1-), bis[1-[[2-(hydroxy- $\kappa$ O)-5-methylphenyl]azo- $\kappa$ N1]-2-naphthalenolato(2-)- $\kappa$ O]-, sodium (9CI) (CA INDEX NAME)

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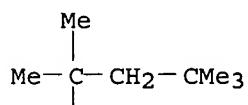
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● Na<sup>+</sup>

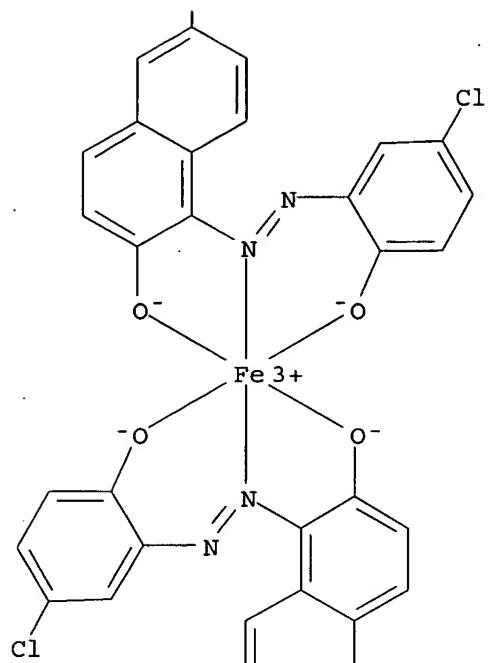
RN 268728-80-9 HCPLUS

CN Ferrate(1-), bis[1-[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-6-(1,1,3,3-tetramethylbutyl)-2-naphthalenolato(2-)-κO]-, sodium (9CI)  
(CA INDEX NAME)

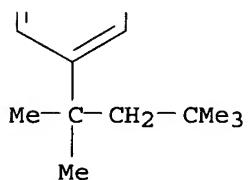
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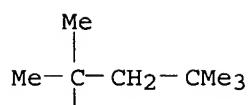
PAGE 3-A

● Na<sup>+</sup>

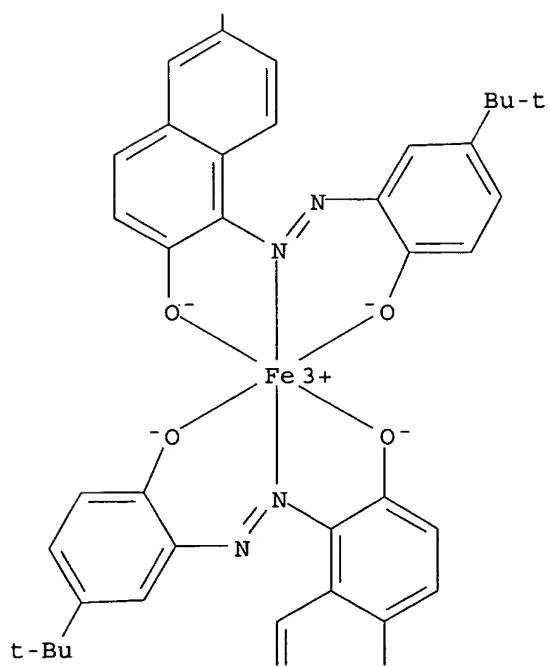
RN 337369-22-9 HCAPLUS

CN Ferrate(1-), bis[1-[5-(1,1-dimethylethyl)-2-(hydroxy- $\kappa$ O)phenyl]azo-  
 $\kappa$ N1]-6-(1,1,3,3-tetramethylbutyl)-2-naphthalenolato(2-)- $\kappa$ O]-,  
 sodium (9CI) (CA INDEX NAME)

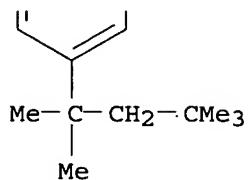
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● Na<sup>+</sup>

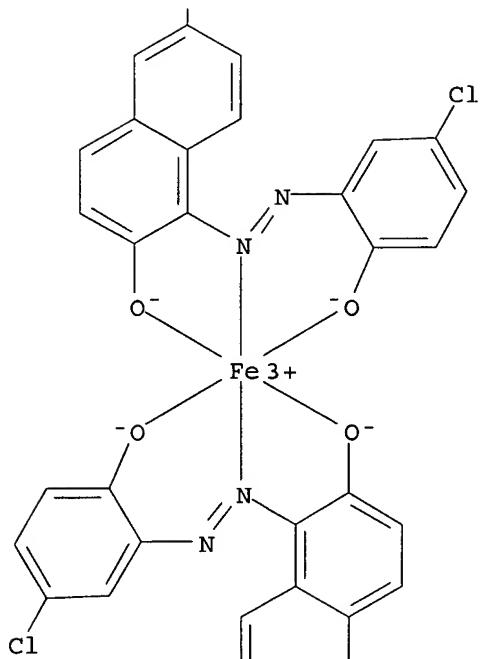
RN 337369-34-3 HCPLUS

CN Ferrate(1-), bis[1-[{5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-6-methyl-2-naphthalenolato(2-)O<sup>-</sup>-, sodium (9CI) (CA INDEX NAME)

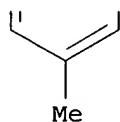
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Me

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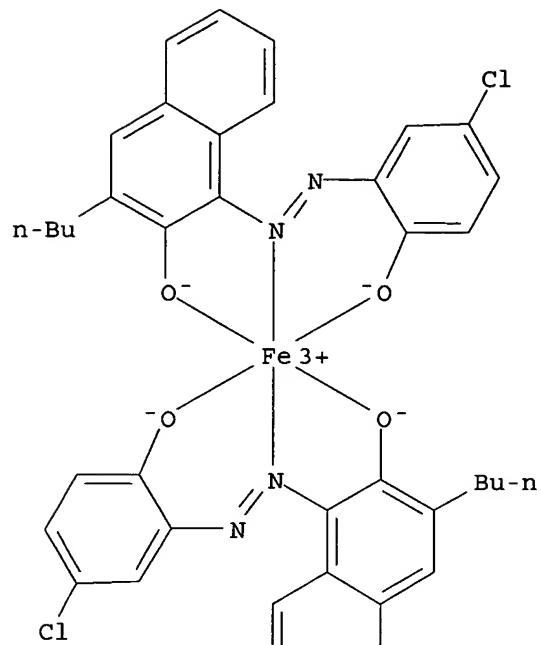


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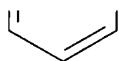
●  $\text{Na}^+$ 

RN 337369-39-8 HCPLUS  
 CN Ferrate(1-), bis[3-butyl-1-[(5-chloro-2-(hydroxy- $\kappa\text{O}$ )phenyl]azo- $\kappa\text{N1}$ ]-2-naphthalenolato(2-) - $\kappa\text{O}$ ], sodium (9CI) (CA INDEX NAME)

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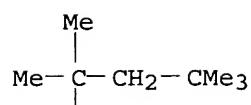


●  $\text{Na}^+$

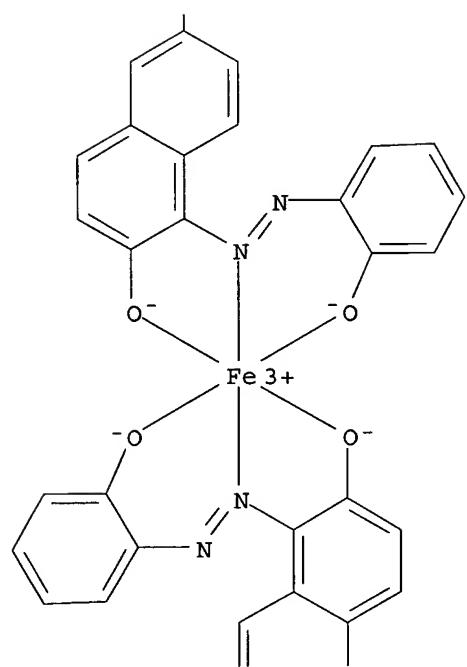
RN 486405-71-4 HCAPLUS

CN Ferrate(1-), bis[1-[2-(hydroxy- $\kappa\text{O}$ )phenyl]azo- $\kappa\text{N1}$ ]-6-(1,1,3,3-tetramethylbutyl)-2-naphthalenolato(2-)- $\kappa\text{O}$ -, potassium (9CI) (CA INDEX NAME)

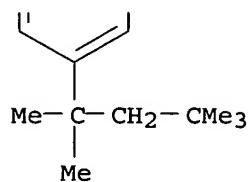
PAGE 1-A



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● K<sup>+</sup>

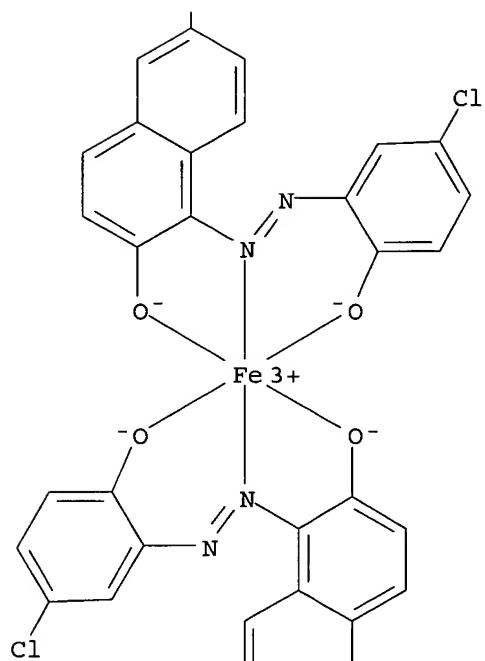
RN 486405-72-5 HCPLUS

CN Ferrate(1-), bis[1-[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-6-(1,1-dimethylethyl)-2-naphthalenolato(2-)- $\kappa$ O]-, potassium (9CI) (CA INDEX NAME)

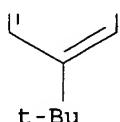
PAGE 1-A

 $\begin{array}{c} \text{t-Bu} \\ | \end{array}$

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● K<sup>+</sup>

IT 119029-85-5P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material

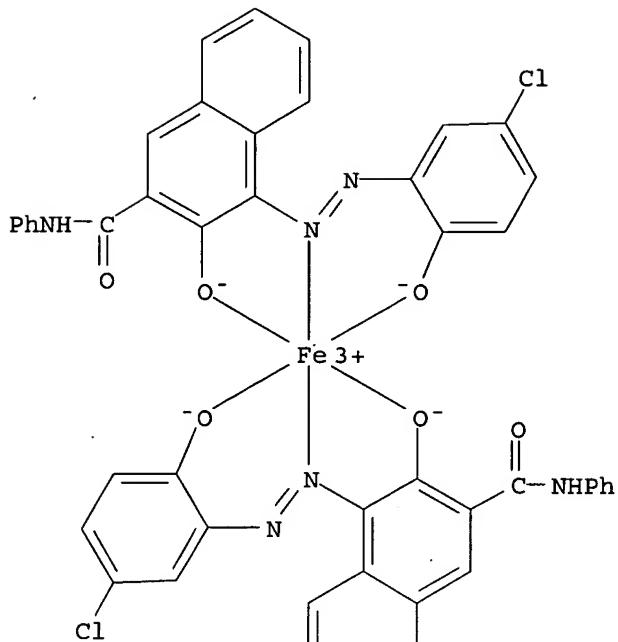
use); PREP (Preparation); USES (Uses)

(toners containing specific organic metal compound and specific binder resin)

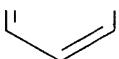
RN 119029-85-5 HCAPLUS

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-3-(hydroxy- $\kappa$ O)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, hydrogen (9CI) (CA INDEX NAME)

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● H<sup>+</sup>

L84 ANSWERATION OF 105 HCPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:17586 HCPLUS

DOCUMENT NUMBER: 138:80645

TITLE: Electrophotographic dry toners containing aliphatic polyesters, their manufacture, and image formation method using the toners

INVENTOR(S): Kawamoto, Keiji; Hashimoto, Akira; Chiba, Takehiko; Kukimoto, Isamu

PATENT ASSIGNEE(S): Canon Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 34 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

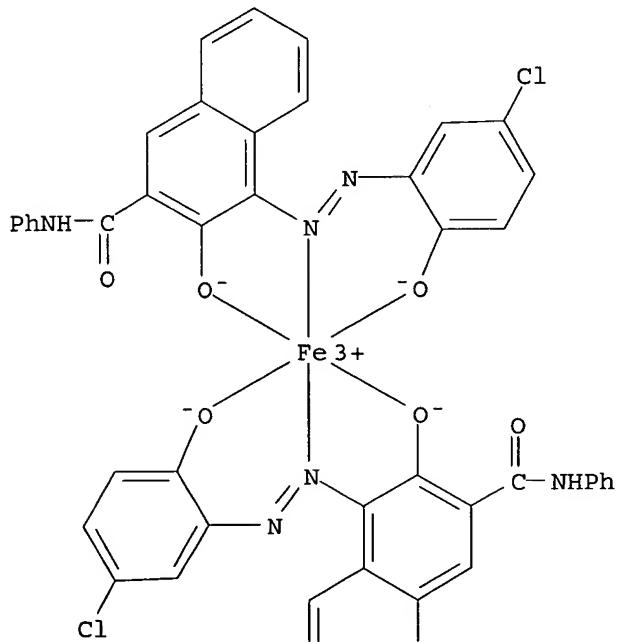
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

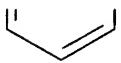
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2003005441 A2 20030108 JP 2001-194074 20010627  
 PRIORITY APPLN. INFO.: MARPAT 138:80645 20010627  
 OTHER SOURCE(S): MARPAT 138:80645  
 ED Entered STN: 09 Jan 2003  
 AB The toners, which show good environmental stability and durability and are free from adhesion to photoreceptor, intermediate transfer belt, fixing unit, etc., contain at least binder resin, colorants, waxes, and polyesters, which comprise aliphatic polybasic carboxylic acids and aliphatic polyhydric alcs. and contain polymerizable double bond in the carboxylic acid unit and/or the alc. unit and satisfy the following phys. properties: equivalent circle number average diameter (D1) = 2-10  $\mu\text{m}$ , average circularity 0.950-0.995, and standard deviation of circularity <0.040 in number base equivalent circular diameter-circularity scattergram measured by a flow-type particle image analyzer. The toners may contain azo dye Fe complexes complexes (Markush structure given) as charge control agents. The toners are manufactured by mixing the polyesters shown above, a polymerizable vinyl monomer composition, colorants, waxes, and polymerization initiator, dispersing the mixture in aqueous medium, and polymerizing the vinyl monomers during granulation. Also claimed are electrophotog. image method using the toners.  
 IT 104815-18-1 163799-98-2  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (neg. charge controlling agent; manufacture of electrophotog. dry toners with controlled size and circularity containing polyesters having polymerizable double bonds)  
 RN 104815-18-1 HCPLUS  
 CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-3-(hydroxy- $\kappa$ O)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)

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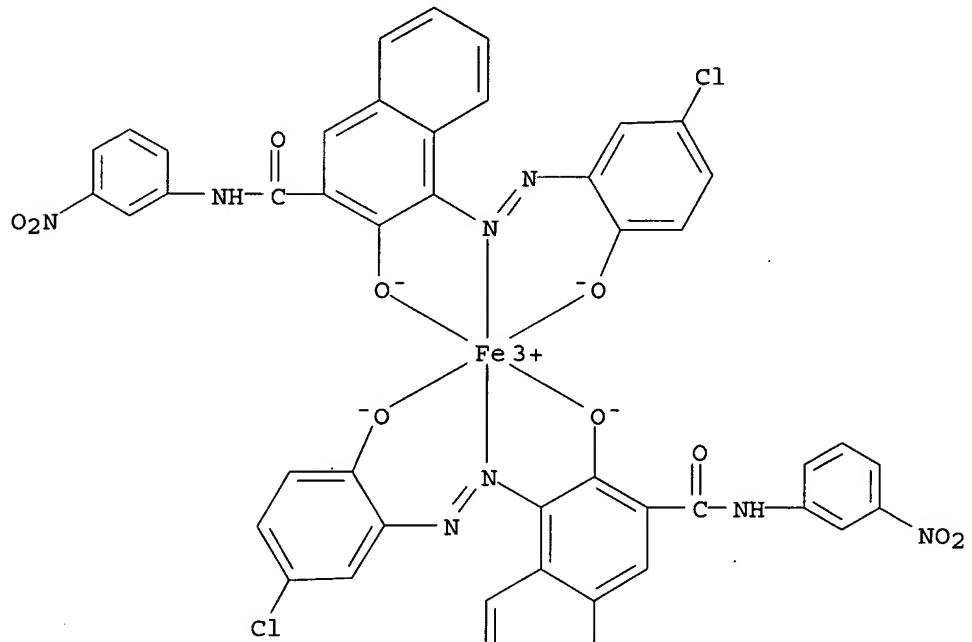
PAGE 2-A

● NH<sub>4</sub><sup>+</sup>

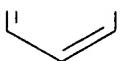
RN 163799-98-2 HCAPLUS

CN Ferrate(1-), bis[4-[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-3-(hydroxy- $\kappa$ O)-N-(3-nitrophenyl)-2-naphthalenecarboxamidato(2-)]-, sodium (9CI) (CA INDEX NAME)

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● Na<sup>+</sup>

L84 ANSWER 11 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2002:51308 HCPLUS  
 DOCUMENT NUMBER: 136:107591  
 TITLE: Limiting the presence of microorganisms using  
 polymer-bound metal-containing compositions  
 INVENTOR(S): Landgrebe, Kevin D.; Hastings, David J.; Smith,  
 Terrance P.; Cuny, Gregory D.; Sengupta, Ashok;  
 Mudalige, Chandrika D.; Brandys, Frank A.  
 PATENT ASSIGNEE(S): 3M Innovative Properties Company, USA  
 SOURCE: PCT Int. Appl., 37 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002004034	A2	20020117	WO 2001-US20205	20010625
WO 2002004034	A3	20020530		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DM, DZ, EC, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6432396	B1	20020813	US 2000-611346	20000706
EP 1299132	A2	20030409	EP 2001-958835	20010625
EP 1299132	B1	20040825		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004506616	T2	20040304	JP 2002-508488	20010625
AT 274359	E	20040915	AT 2001-958835	20010625
PRIORITY APPLN. INFO.:			US 2000-611346	A 20000706
			WO 2001-US20205	W 20010625

OTHER SOURCE(S): MARPAT 136:107591

ED Entered STN: 18 Jan 2002

AB The present invention provides a method of limiting the presence of a microorganism by contacting the microorganism with polymer-bound metal-containing The compns. include metal-containing compds. that may be prepared

by reacting or polymerizing metal-containing monomers. The microorganism may be present in a liquid that is contacted with the polymer-bound metal-containing composition Alternatively, the microorganism may be present in a solid that is contacted with the polymer-bound metal-containing composition A metal-containing monomer was prepared by the reaction of

2-salicylideneaminophenol, potassium tetrachloroplatinate, and 4-vinylpyridine. A polyurethane-bound metal-contg.composition was prepared using

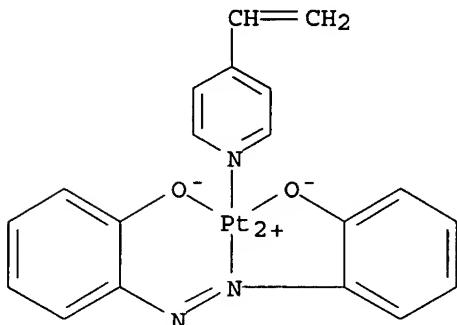
above monomer. Virucidal activity of the above polyurethane was shown against equine infectious anemia virus.

IT 147361-10-2P 222989-09-5P  
 RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
 (limiting presence of microorganisms using polymer-bound

metal-containing compns.)

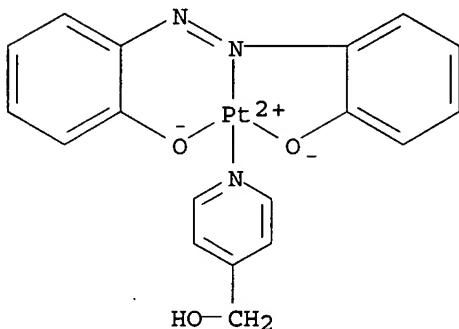
RN 147361-10-2 HCAPLUS

CN Platinum, [[2,2'-(azo- $\kappa$ N)bis[phenolato- $\kappa$ O]](2-)](4-ethenylpyridine)-, (SP-4-2)- (9CI) (CA INDEX NAME)



RN 222989-09-5 HCAPLUS

CN Platinum, [[2,2'-(azo- $\kappa$ N)bis[phenolato- $\kappa$ O]](2-)](4-pyridinemethanol- $\kappa$ N1)-, (SP-4-2)- (9CI) (CA INDEX NAME)



L84 ANSWER 12 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:80606 HCAPLUS

DOCUMENT NUMBER: 138:90266

TITLE: Transition metal complexes of tridentate ligands for olefin polymerization

INVENTOR(S): Tang, Yong; Sun, Xiuli; Hu, Weiqiu

PATENT ASSIGNEE(S): Shanghai Inst. of Organic Chemistry, Chinese Academy of Sciences, Peop. Rep. China

SOURCE: Faming Zhanli Shengqing Gongkai Shuomingshu, 59 pp.

CODEN: CNXXEV

DOCUMENT TYPE: Patent

LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1332182	A	20020123	CN 2001-126323	20010723
WO 2003010207	A1	20030206	WO 2002-CN425	20020617

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CO,

CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM,  
 HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,  
 LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL,  
 PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA,  
 UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,  
 CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,  
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  
 EP 1426385 A1 20040609 EP 2002-754132 20020617  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR  
 US 2005004331 A1 20050106 US 2004-761827 20040121  
 PRIORITY APPLN. INFO.: CN 2001-126323 A 20010723  
 CN 2002-110844 A 20020209  
 WO 2002-CN425 W 20020617

OTHER SOURCE(S): MARPAT 138:90266

ED Entered STN: 03 Feb 2003

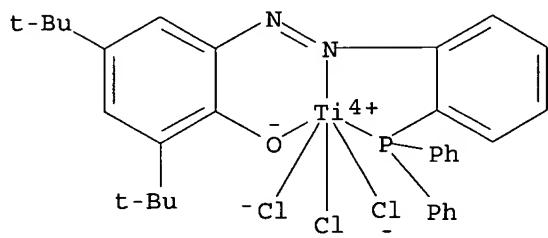
AB A new olefin **polymerization catalyst** comprises Group 3-11 transition metal and tridentate ligands containing N, P and O atoms, which were prepared by condensation of a substituted salicylaldehyde with an phosphine-substituted aniline or amine. Thus, ethylene was **polymd** . in the presence of 2  $\mu\text{mol}$  **catalyst I** (preparation given) and MAO ( $\text{Al}/\text{Ti} = 1500$ ) at  $50^\circ$  for 1.5 h to yield 1.8 g polyethylene with  $M_w$  630,000, activity  $1.8+10^6$  g PE/mol Ti·h·atm, and polydispersity 1.22.

IT 484697-27-0P

RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)  
 (olefin polymerization catalysts comprising transition metals and tridentate ligands containing O, N or P heteroatoms)

RN 484697-27-0 HCPLUS

CN Titanium, [2,4-bis(1,1-dimethylethyl)-6-[[2-(diphenylphosphino- $\kappa\text{P}$ )phenyl]azo- $\kappa\text{N}2\text{N}$ ]phenolato- $\kappa\text{O}](\text{Cl})_3$  (CA INDEX NAME)



L84 ANSWER 13 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:210143 HCPLUS

DOCUMENT NUMBER: 134:245211

TITLE: Nonmagnetic one-component electrophotographic toner involving negatively chargeable charge controller and ethylene-propylene copolymer

INVENTOR(S): Umno, Mikio; Takehara, Ryuji; Senoguchi, Terunori; Owada, Takeshi; Sugihara, Masakazu

PATENT ASSIGNEE(S): Mitsubishi Chemical Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

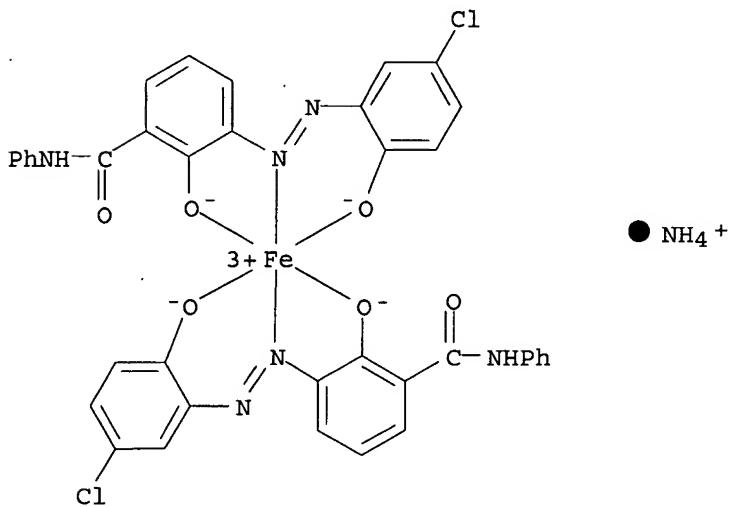
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001075312	A2	20010323	JP 1999-283898	19991005
PRIORITY APPLN. INFO.:			JP 1999-192560	A 19990707
OTHER SOURCE(S):	MARPAT 134:245211			
ED	Entered STN: 23 Mar 2001			
AB	The toner contains a polyester, a colorant, a metal-containing azo-type charge controller, and ethylene-propylene copolymer with m.p. 125-140°. The toner containing the neg.-chargeable charge controller and the ethylene-propylene copolymer with regulated m.p. shows rapid charge up and offset prevention in small-size printers.			
IT	156108-08-6, T 77			
	RL: TEM (Technical or engineered material use); USES (Uses) (T 77; nonmagnetic one-component electrophotog. toner containing polyester, metal azo compound charge controller, and ethylene-propylene copolymer)			
RN	156108-08-6 HCPLUS			
CN	Ferrate(1-), bis[3-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-2-(hydroxy- $\kappa$ O)-N-phenylbenzamido(2-)]-, ammonium (9CI) (CA INDEX NAME)			



L84 ANSWER 14 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:432997 HCPLUS

DOCUMENT NUMBER: 135:26876

TITLE: Toner for electrophotography

INVENTOR(S): Okuyama, Hisashi; Horibe, Yasumasa; Suwa, Yoshihito

PATENT ASSIGNEE(S): Tomoegawa Paper Co. Ltd., Japan; Shimadzu Corporation; Toyota Motor Co. Ltd.

SOURCE: Eur. Pat. Appl., 16 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1107069	A1	20010613	EP 2000-311002	20001208
EP 1107069	B1	20040331		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2001166537	A2	20010622	JP 1999-352412	19991210
US 2001003636	A1	20010614	US 2000-730736	20001207
US 6432600	B2	20020813		

PRIORITY APPLN. INFO.: JP 1999-352412 A 19991210

ED Entered STN: 15 Jun 2001

AB The invention relates to a binder resin having high elec. power efficiency and excellent resin strength that may be used for a toner for electrophotog. The toner includes a poly(lactic acid)-type biodegradable resin and a terpene-phenol **copolymer**. The molar concentration of 1 of the L-lactic acid units and D-lactic acid units in a lactic acid component of the poly(lactic acid)-type biodegradable resin is in the range between .apprx.75 mol% and .apprx.98 mol%. The terpene-phenol **copolymer** may include  $\geq 1$  composition selected from the group consisting of: (a) cyclic terpene-phenol **copolymer**, prepared by **copolymg.** cyclic terpene and phenol; (b) cyclic terpene/phenol (1:2 molar ratio) addition product, prepared by adding 2 mols. of phenol to 1 mol of cyclic terpene; (c) polycyclic terpene/phenol (1:2 molar ratio) addition product, prepared by a condensation reaction of the cyclic terpene/phenol (1:2 molar ratio) addition product with 1 of aldehyde and ketone; and (d) polycyclic terpene/phenol (1:1 molar ratio) addition product, prepared by a condensation reaction of a cyclic terpene/phenol (1:1 molar ratio) addition product with 1 of aldehyde and ketone. The toner of the invention is applicable to a full-color toner.

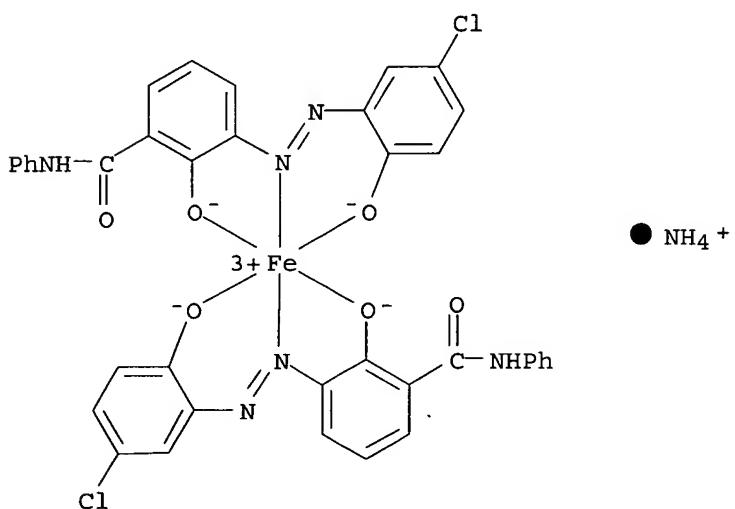
IT 156108-08-6

RL: NUU (Other use, unclassified); TEM (Technical or engineered material use); USES (Uses)

(T 77; toner for electrophotog. having poly(lactic acid)-type biodegradable resin and terpene-phenol **polymer**)

RN 156108-08-6 HCAPLUS

CN Ferrate(1-), bis[3-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-2-(hydroxy- $\kappa$ O)-N-phenylbenzamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L84 ANSWER 15 OF 105 HCAPLUS' COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2001:319607 HCAPLUS  
 DOCUMENT NUMBER: 134:334250  
 TITLE: Electrophotographic dry toner preparation using dispersion aqueous polymerization and image forming method  
 INVENTOR(S): Komoto, Keiji; Kukimoto, Tsutomu; Chiba, Tatsuhiko; Hashimoto, Akira  
 PATENT ASSIGNEE(S): Canon Kabushiki Kaisha, Japan  
 SOURCE: Eur. Pat. Appl., 62 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1096324	A1	20010502	EP 2000-123122	20001025
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002196532	A2	20020712	JP 2000-325956	20001025
US 6635398	B1	20031021	US 2000-695079	20001025
PRIORITY APPLN. INFO.:			JP 1999-304680	A 19991026
			JP 2000-320708	A 20001020
			JP 2000-320709	A 20001020

OTHER SOURCE(S): MARPAT 134:334250

ED Entered STN: 04 May 2001

AB A dry toner has toner particles containing at least a binder resin, a colorant and a wax component, and an external additive. The binder resin contains a component derived from a monomer selected from the group consisting of butadiene, isoprene and chloroprene. The toner has a main Tg of from 40°C to 70°C as measured by DSC. When sp. surface area of the toner measured by the BET method at two different conditions: (1) the toner is left for 72 h in an environment of 23°C atmospheric temperature and

65%

relative humidity (represented by A (m<sup>2</sup>/g)), and (2) the toner is left for 72 h in an environment of 50°C atmospheric temperature and 3% relative humidity (represented by B (m<sup>2</sup>/g)), the toner satisfies the following relationship: 0.8 ≤ A ≤ 4.0, 0.80 ≤ (B/A) ≤ 1.05. In a toner's number-based circle-corresponding diameter/circularity scatter diagram as measured with a flow type particle image analyzer, the toner has a circle-corresponding number-average particle diameter D<sub>1</sub> of from 2 to 10 μm

and

has an average circularity of from 0.950 to 0.995 and a circularity standard deviation of less than 0.040. The toner has, in its mol.-weight distribution of THF-soluble matter as measured by GPC, a main-peak mol. weight in the region of from 2,000 to 100,000 and contains a THF-insol. matter in an amount of from 5 to 60% by weight. The object of the invention is to provide a dry toner having a superior charging stability and fixing performance.

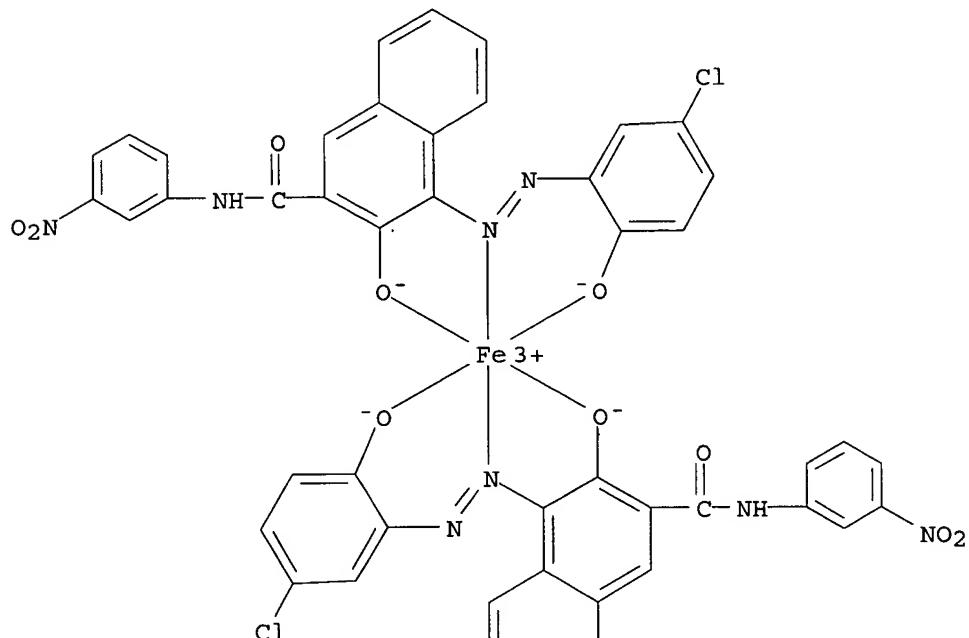
IT 163799-98-2

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (charge control agent; preparation of electrophotog. dry toner by dispersion polymerization using different polymerization initiators)

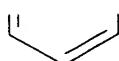
RN 163799-98-2 HCAPLUS

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-3-(hydroxy- $\kappa$ O)-N-(3-nitrophenyl)-2-naphthalenecarboxamidato(2-)]-, sodium (9CI) (CA INDEX NAME)

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●  $\text{Na}^+$

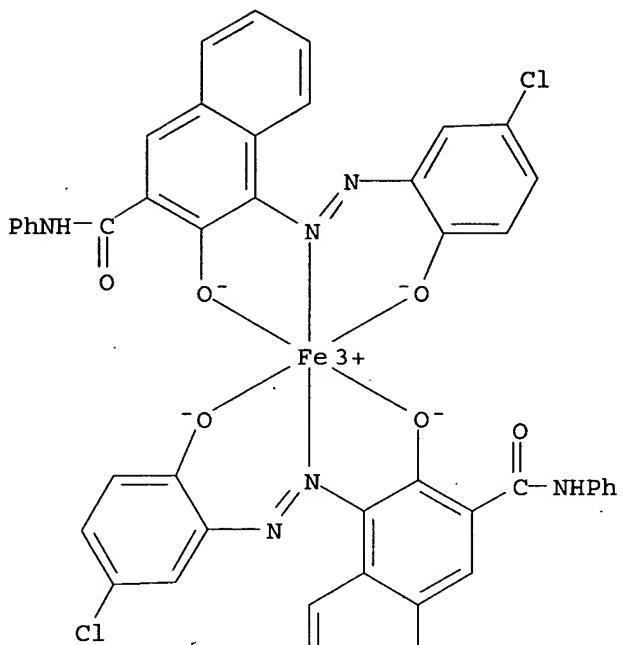
IT 104815-18-1

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(preparation of electrophotog. dry toner by dispersion **polymerization** using different **polymerization** initiators)

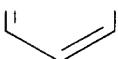
RN 104815-18-1 HCAPLUS

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-3-(hydroxy- $\kappa$ O)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)

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● NH<sub>4</sub><sup>+</sup>

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L84 ANSWER 16 OF 105 HCPLUS /COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:152663 HCPLUS

DOCUMENT NUMBER: 132:194841

TITLE: Transition metal compounds and high-activity catalysts for polymerization of olefins

INVENTOR(S): Nitabaru, Masatoshi; Tsudome, Kazutaka; Matsui, Shigekazu; Fujita, Terunori

PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 36 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

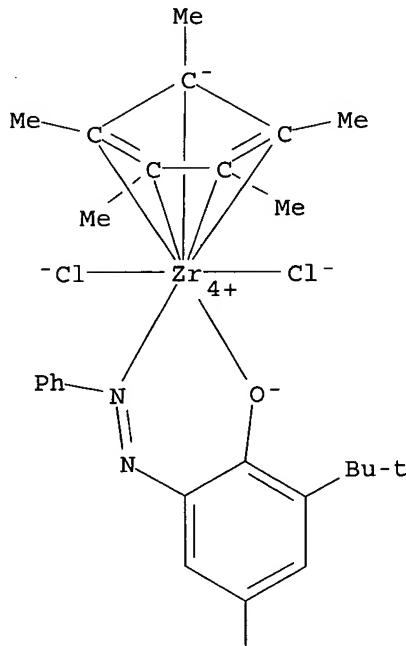
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000072810	A2	20000307	JP 1998-242307 JP 1998-242307	19980827 19980827
PRIORITY APPLN. INFO.:				
OTHER SOURCE(S): MARPAT 132:194841				
ED	Entered STN: 08 Mar 2000			
AB	<p>The transition metal compds. have (A) cyclopentadienyl-based ligands and (B) ligands selected from R1R2NYCR3:CR4A-, R1N-YCR3:CR4AR6, or R1N-YCR3:CA-R4 (A = O, S, Se, N having R5; R1 and R2 may be substituted by :NRa or :CRbRc; R1-R5, Ra-Rc = H, halo, hydrocarbyl, heterocyclic group, O-, N-, B-, S-, P-, Si-, Ge-, or Sn-containing group; Y = C, N, S, O, B, Si). The <b>catalysts</b> contain the metal compds. and <math>\geq 1</math> compds. selected from organometallic compds., organic aluminoxo compds., and compds. forming ion pairs with the metal compds. Thus, aniline and 3-tert-butylsalicylaldehyde were treated and then with cyclopentadienyltitanium trichloride to give a compound. Ethylene was polymerized in the presence of the compound and Me aluminoxane to give a polyethylene with polymerization activity 345 g/mmol Ti-h and intrinsic viscosity 17.5 dL/g.</p>			
IT	259855-32-8P			
	RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)			
	(transition metal compds. as high-activity <b>catalysts</b> for polymerization of olefins)			
RN	259855-32-8 HCPLUS			
CN	Zirconium, dichloro[2-(1,1-dimethylethyl)-4-methyl-6-(phenylazo- $\kappa$ N2)phenolato- $\kappa$ O] [(1,2,3,4,5- $\eta$ )-1,2,3,4,5-pentamethyl-2,4-cyclopentadien-1-yl]- (9CI) (CA INDEX NAME)			

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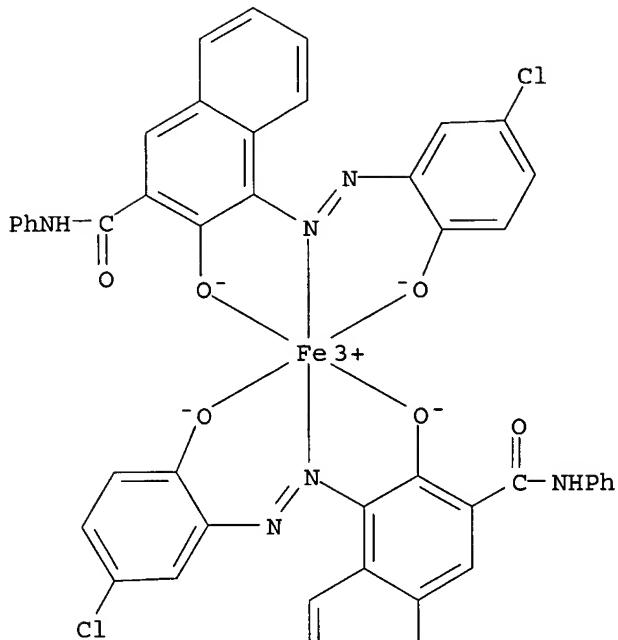
Me

L84 ANSWER 17 OF 105 HCAPLUS' COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1999:670070 HCAPLUS  
 DOCUMENT NUMBER: 131:305120  
 TITLE: Electrophotographic toner comprising crosslinked  
**polymer** binder  
 INVENTOR(S): Tyagi, Dinesh; Hadcock, Richard L.  
 PATENT ASSIGNEE(S): Eastman Kodak Co., USA  
 SOURCE: U.S., 10 pp., Cont.-in-part of U.S. Ser. No. 657,473,  
 abandoned.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

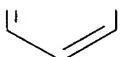
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5968700	A	19991019	US 1998-16065	19980130
JP 09106104	A2	19970422	JP 1996-196517	19960725
PRIORITY APPLN. INFO.:			US 1995-1632P	P 19950728
			US 1996-657473	B2 19960529

ED Entered STN: 21 Oct 1999  
 AB There is provided an electrophotog. toner containing a binder comprising (A) a **copolymer** comprising a vinyl aromatic monomer, a monomer selected from the group consisting of (1) conjugated diene monomers and (2) acrylate monomers selected from the group consisting of alkyl acrylate monomers and alkyl methacrylate monomers, and a crosslinking agent or a polyester made from aromatic dicarboxylic acids and one or more aliphatic diols and (B) an alkylsarcosine or a salt thereof having an alkyl group which contains from about 10 to about 20 carbon atoms.  
 IT 167548-21-2D, ammonium or hydrogen or sodium salt  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (electrophotog. toners containing alkylsarcosines, crosslinked  
**polymers** and)  
 RN 167548-21-2 HCAPLUS  
 CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-3-(hydroxy- $\kappa$ O)-N-phenyl-2-naphthalenecarboxamido(2-)]- (9CI) (CA  
 INDEX NAME)

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REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L84 ANSWER 18 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1999:752435 HCPLUS  
 DOCUMENT NUMBER: 132:7557  
 TITLE: Electrostatographic developers containing polymer-coated carriers  
 INVENTOR(S): Tashiro, Hirotaka; Sato, Yukihiro; Kigami, Yoshihiro  
 PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11327215	A2	19991126	JP 1998-140397	19980508
PRIORITY APPLN. INFO.:			JP 1998-140397	19980508
OTHER SOURCE(S):	MARPAT	132:7557		
ED Entered STN:	26 Nov 1999			
AB	The developers, for image formation by using (A) magnet-containing cylindrical			

developer-transporting materials and (B) cylindrical electrostatic latent image receptors with diameter  $\leq 30$  mm, where ratio of peripheral velocity of A to B  $\leq 4$ , contain carriers coated with materials containing alc. OH group-containing organic polymers and silicones. The developers may contain toners comprising styrene polymers, coloring agents, and metal complexes of monoazo dyes. The developers show good repeating durability and give high-d. images.

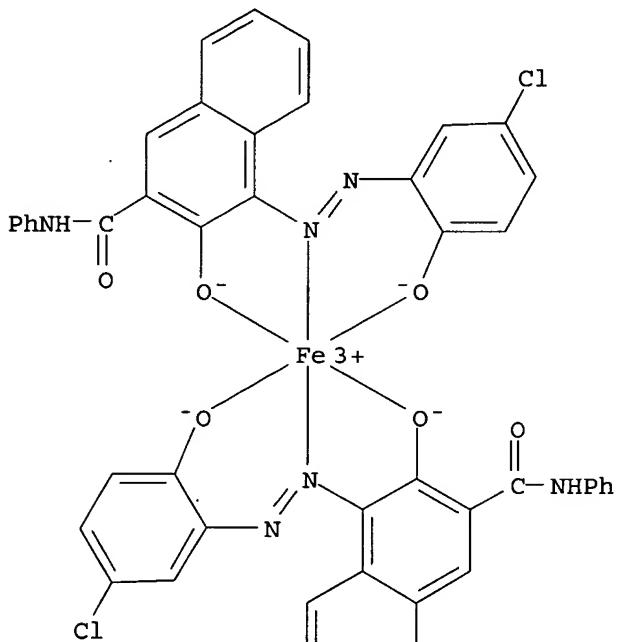
IT 119029-85-5

RL: TEM (Technical or engineered material use); USES (Uses)  
(charge-controlling agents; electrostatog. developers containing carriers coated with hydroxy-containing polymers and silicones)

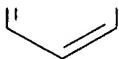
RN 119029-85-5 HCAPLUS

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-3-(hydroxy- $\kappa$ O)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, hydrogen (9CI) (CA INDEX NAME)

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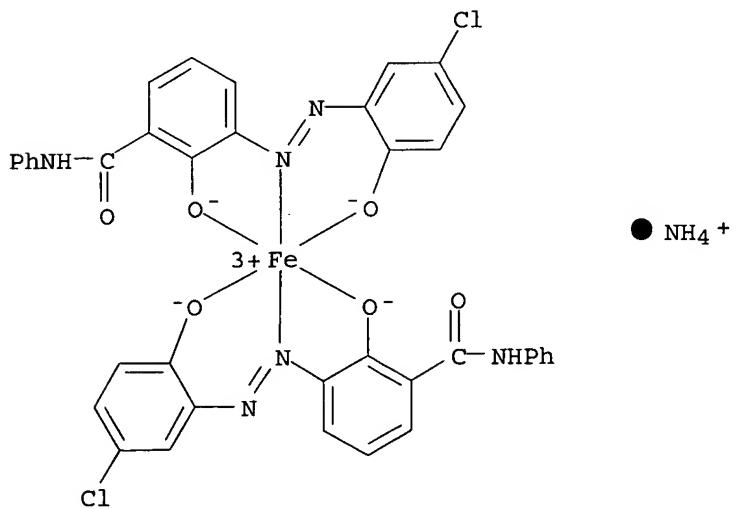
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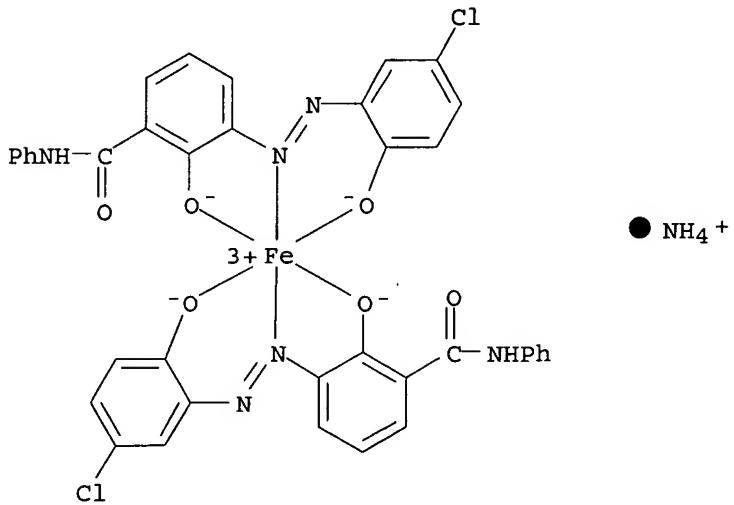
DOCUMENT NUMBER: 131:250442  
 TITLE: Electrophotographic encapsulated toner for fixing under heat and pressure  
 INVENTOR(S): Akiyama, Koji; Fukushima, Yoshihiro; Suenaga, Kenichi; Yamaguchi, Koji  
 PATENT ASSIGNEE(S): Kao Corp., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11258848	A2	19990924	JP 1998-61650	19980312
			JP 1998-61650	19980312

PRIORITY APPLN. INFO.:  
 ED Entered STN: 26 Sep 1999  
 AB The toner comprises at least a hot-melt core material containing a thermoplastic resin encapsulated with a hydrophilic resin and contains 0.5-0.25 weight% (based on the hydrophilic resins) a neg. charge-controlling agent and 0.5-30 weight% (based on the neg. charge-controlling agent) a pos. charge-controlling agent. Alternatively, the toner contains 0.5-25 weight% (based on the hydrophilic resin) the pos. charge-controlling agent and 0.5-30 weight% (based on the pos. charge-controlling agent) neg. charge-controlling agent. The toner shows improved environmental stability.  
 IT 156108-08-6, T 77  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (neg. charge-controlling; encapsulated electrophotog. toner comprising hot-melt thermoplastic core and hydrophilic resin capsule with pos. and neg. charge-controlling agent)  
 RN 156108-08-6 HCAPLUS  
 CN Ferrate(1-), bis[3-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-2-(hydroxy- $\kappa$ O)-N-phenylbenzamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)



ACCESSION NUMBER: 2000:350912 HCAPLUS  
 DOCUMENT NUMBER: 133:127530  
 TITLE: TSC measurements on electrophotographic toner layers  
 with charge control agent  
 AUTHOR(S): Otani, Shinji; Matsumoto, Yuto; Takeuchi, Manabu  
 CORPORATE SOURCE: Ibaraki University, Ibaraki, Japan  
 SOURCE: Proceedings - International Symposium on Electrets,  
 10th, Delphi, Greece, Sept. 22-24, 1999 (1999),  
 355-358. Editor(s): Konsta, Amalia A.;  
 Vassilikou-Dova, Aglaia; Vartzeli-Nikaki, Kalliopi.  
 Institute of Electrical and Electronics Engineers: New  
 York, N. Y.  
 CODEN: 69AJAU  
 DOCUMENT TYPE: Conference  
 LANGUAGE: English  
 ED Entered STN: 26 May 2000  
 AB Thermally stimulated current (TSC) measurements were carried out on  
 polymers with several kinds of charge control agent (CCA) to study  
 their charging mechanism. A new peak appeared in the TSC curves for the  
 resin with CCA, which are expected to work as trapping sites for  
 tribocharging. The TSC measurements on the CCA/resin stacked layers  
 suggest that the interface between CCA and resin works as charging sites  
 for tribocharging.  
 IT 156108-08-6, Aizen Spilon Black T 77  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (Aizen Spilon Black T 77; charging mechanism of electrophotog.  
 polymer toner layers containing charge control agents studied by  
 thermally stimulated current measurements)  
 RN 156108-08-6 HCAPLUS  
 CN Ferrate(1-), bis[3-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-2-(hydroxy- $\kappa$ O)-N-phenylbenzamidato(2-)]-, ammonium (9CI) (CA INDEX  
 NAME)



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L84 ANSWER 21 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1997:475817 HCAPLUS  
 DOCUMENT NUMBER: 127:101731

TITLE: Electrostatographic developer toners  
 INVENTOR(S): Kobori, Naokuni; Katada, Masaichiro; Kasuya, Takashige  
 PATENT ASSIGNEE(S): Canon K. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 26 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09127723	A2	19970516	JP 1995-303385	19951030
PRIORITY APPLN. INFO.:			JP 1995-303385	19951030

OTHER SOURCE(S): MARPAT 127:101731

ED Entered STN: 31 Jul 1997

AB In the electrostatog. developer toners comprising a **polymer** component, a colorant, a releasing agent, and a charge-controlling agent, the releasing agent contains a polyolefin modified by an aromatic vinyl monomer and the **polymer** component satisfies the following: (1) it is virtually free of a THF-insol. fraction; (2) the THF-insol. fraction has a main mol. weight peak in 3,000-30,000 and a sub-peak or a shoulder in 1 + 105-3 + 106 in the GPC chromatogram; (3) the **polymer** component with the mol. weight  $\geq$  1 + 106 occupies 1-20% of the total chromatogram area; and (4) the **polymer** component with the mol. weight  $\geq$  1 + 105 has the acid value of 0.5-20 mgKOH/g. The charge-controlling agent contains an organometallic compound. Use of the charge-controlling agent and the **polymer** component improved low-temperature fixability and offset resistance.

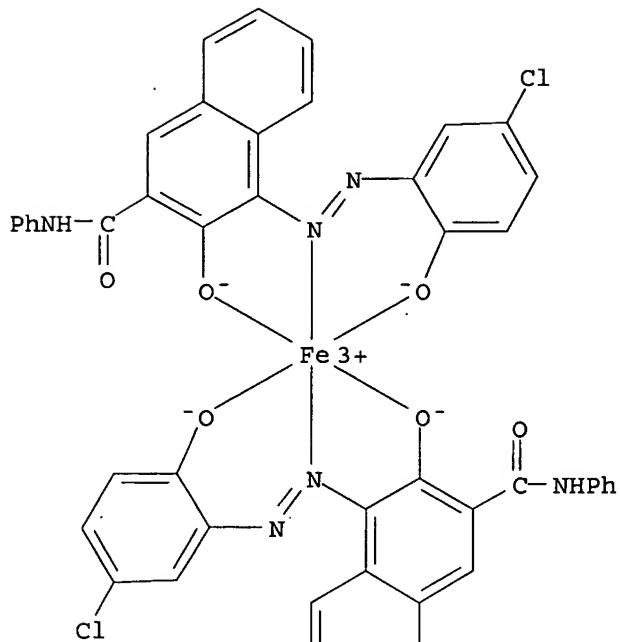
IT 104815-18-1

RL: MOA (Modifier or additive use); USES (Uses)  
(organometallic charge-controlling agent and **polymer** component in electrostatog. developer toners)

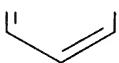
RN 104815-18-1 HCAPLUS

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-3-(hydroxy- $\kappa$ O)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)

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L84 ANSWER#22 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1997:475818 HCPLUS  
 DOCUMENT NUMBER: 127:101732  
 TITLE: Electrostatographic developer toners  
 INVENTOR(S): Kobori, Naokuni; Kasuya, Takashige; Katada, Masaichiro  
 PATENT ASSIGNEE(S): Canon K. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 29 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09127722	A2	19970516	JP 1995-303310	19951030
JP 3347557	B2	20021120		
PRIORITY APPLN. INFO.:			JP 1995-303310	19951030

OTHER SOURCE(S): MARPAT 127:101732

ED Entered STN: 31 Jul 1997

AB In the electrostatog. developer toners comprising a **polymer** component, a colorant, a releasing agent, and a charge-controlling agent, the releasing agent contains a polyolefin modified by an aromatic vinyl monomer, and the **polymer** component satisfies the following: (1) it is virtually free of a THF-insol. fraction; (2) the THF-insol. fraction has a main mol. weight peak in 3,000-30,000 and a sub-peak or a shoulder in 1 + 105-3 + 106 in the GPC chromatogram; and (3) the acid values (Avl and Vvh, resp.) of the low- and high-mol. weight **polymers**. The charge-controlling agent contains an organometallic compound Use of the charge-controlling agent and the **polymer** component improved low-temperature fixability and offset resistance.

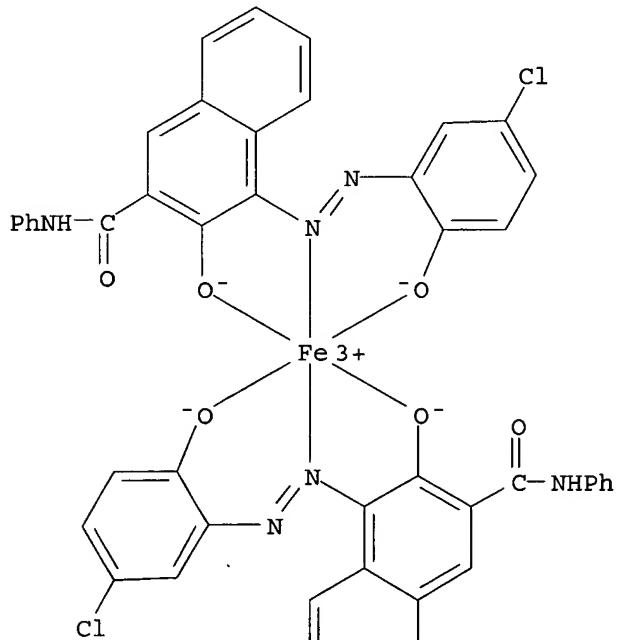
IT 104815-18-1

RL: MOA (Modifier or additive use); USES (Uses)  
(organometallic charge-controlling agent and **polymer** component in electrostatog. developer toners)

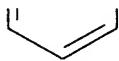
RN 104815-18-1 HCPLUS

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-3-(hydroxy- $\kappa$ O)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)

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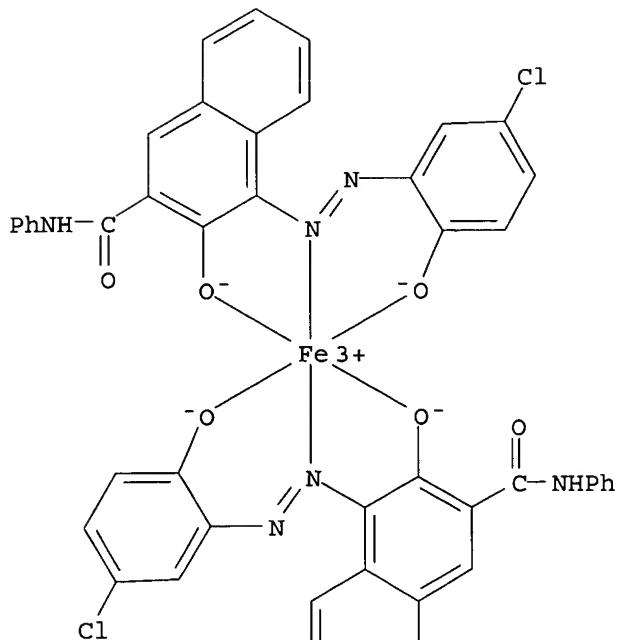
PAGE 2-A

● NH<sub>4</sub><sup>+</sup>

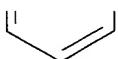
L84 ANSWER 23 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1996:505820 HCAPLUS  
 DOCUMENT NUMBER: 125:154354  
 TITLE: Electrophotographic toner containing iron-containing azo dye and styrene copolymer as charge controllers and two-component electrophotographic developer containing it  
 INVENTOR(S): Watanabe, Kazuto; Minamitani, Toshiki  
 PATENT ASSIGNEE(S): Ricoh Kk, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08123096	A2	19960517	JP 1995-248581	19950901
JP 3409102	B2	20030526		
US 5597673	A	19970128	US 1995-522929	19950901
PRIORITY APPLN. INFO.:			JP 1994-234325	, A 19940902
OTHER SOURCE(S):	MARPAT 125:154354			
ED	Entered STN: 23 Aug 1996			
AB	The toner comprises a binder resin, a colorant, and a charge controller consisting of (a) an Fe-containing azo dye I (X <sub>1</sub> , X <sub>2</sub> = H, lower alkyl, lower alkoxy, NO <sub>2</sub> , halo; m, q = 1-2; R <sub>1</sub> , R <sub>3</sub> = H, C <sub>1-12</sub> alkyl, alkenyl, sulfonamido, mesyl, SO <sub>3</sub> H, carboxy ester, OH, C <sub>1-12</sub> alkoxy, acetylamino, benzoylamino, halo; n, p = 1-3; R <sub>2</sub> , R <sub>4</sub> = H, NO <sub>2</sub> ; A = H, Na, K, NH <sub>4</sub> ) with surface occurrence 7 + 10 <sup>-3</sup> - 20 + 10 <sup>-3</sup> g/g toner and (b) a copolymer of a styrene/acrylic monomer and a SO <sub>3</sub> H-containing acrylamide. The two-component developer consists of the toner and a carrier coated with a silicone resin coating layer containing elec. conductive fine particles and a Si coupling agent. The toner shows good charging property.			
IT	104815-18-1			
RL	MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)			
	(charge controller; two-component electrophotog. developer consisting of toner containing iron-containing azo dye and styrene copolymer as charge controllers and silicone-coated carrier)			
RN	104815-18-1 HCAPLUS			
CN	Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-3-(hydroxy- $\kappa$ O)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)			

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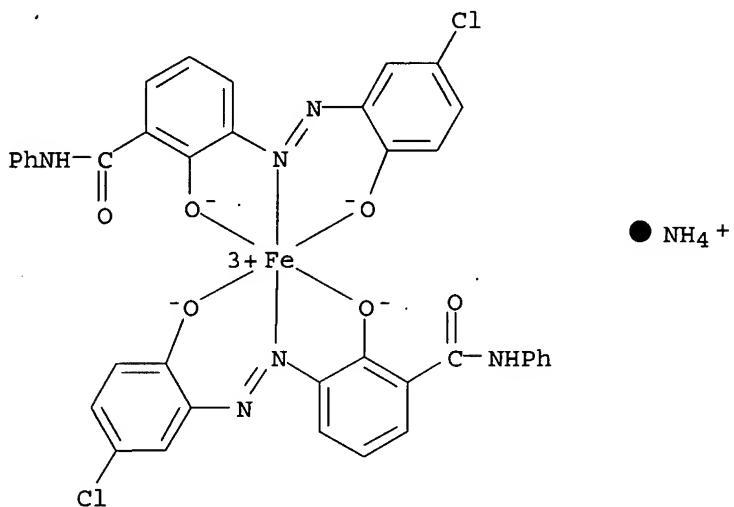
PAGE 2-A



L84 ANSWER 24 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1996:179154 HCPLUS  
 DOCUMENT NUMBER: 124:216085  
 TITLE: Manufacture of electrophotographic toner involving  
 coating of fluoropolymer in plasma  
 atmosphere  
 INVENTOR(S): Suzuki, Takanori; Kuroasaki, Masaari  
 PATENT ASSIGNEE(S): Tomoegawa Paper Co Ltd, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08006291	A2	19960112	JP 1994-156475	19940616

PRIORITY APPLN. INFO.: / JP 1994-156475 19940616  
 ED Entered STN: 28 Mar 1996  
 AB The toner is manufactured by producing plasma from a F-containing monomer gas at 5-150W and 2.66-266 Pa, followed by treating toner particles for 10 s-30 min in the plasma atmospheric for application of a plasma-polymerized film. The toner shows good heat and moisture resistance.  
 IT 156108-08-6, T 77  
 RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (manufacture of electrophotog. toner involving coating of fluoropolymer in plasma atmospheric)  
 RN 156108-08-6 HCPLUS  
 CN Ferrate(1-), bis[3-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-2-(hydroxy- $\kappa$ O)-N-phenylbenzamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)



L84 ANSWER 25 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1995:986700 HCPLUS  
 DOCUMENT NUMBER: 124:131470  
 TITLE: Heat- and pressure-fixable electrophotographic capsule toner and its manufacture  
 INVENTOR(S): Sakamoto, Yoshinobu; Asano, Tetsuya; Yamaguchi, Takashi; Kawabe, Kunyasu  
 PATENT ASSIGNEE(S): Kao Corp, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07248644	A2	19950926	JP 1994-66812	19940309
JP 3219226	B2	20011015		
PRIORITY APPLN. INFO.: ,			JP 1994-66812	19940309
OTHER SOURCE(S):	MARPAT	124:131470		

ED Entered STN: 16 Dec 1995

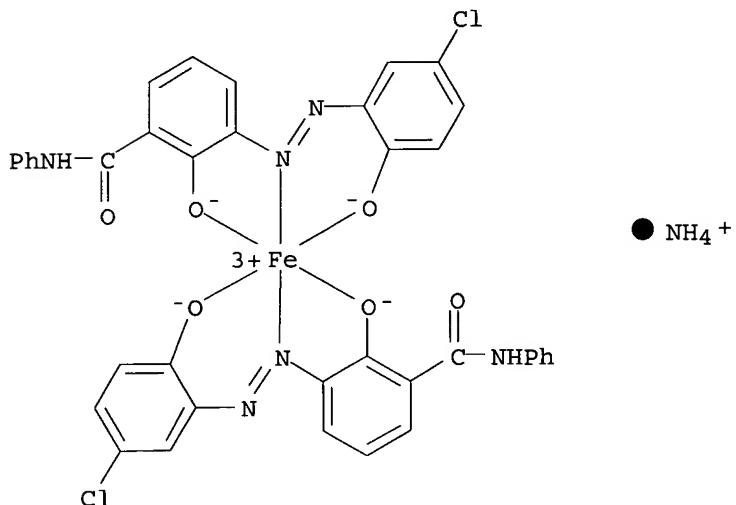
AB In manufacture of the capsule toner comprising a heat-meltable core material containing a thermoplastic resin and a coloring agent coated with a shell, a **polymerizable** composition containing **polymerizable** monomers, a coloring agent, I (M = Fe, Cr; X, Y1, Y2 = ArNHCO, H, Cl, Br, NO<sub>2</sub>; Z = H, Na, K, NH<sub>4</sub>, NR<sub>4</sub>; Ar = Ph which may be substituted for C1-4 alkyl; A = C 1-4 alkyl), and a hydrophilic shell material is suspension-**polymd** . to form a core and a shell. The toner shows good fixability and antioffset and antiblocking properties.

IT 156108-08-6, T 77

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
(manufacture of electrophotog. capsule toner by suspension **polymerization** using charge-controlling agent)

RN 156108-08-6 HCPLUS

CN Ferrate(1-), bis[3-[(5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-2-(hydroxy- $\kappa$ O)-N-phenylbenzamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)



L84 ANSWER 26 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1995:869564 HCPLUS

DOCUMENT NUMBER: 123:259155

TITLE: Modification of particle surfaces by plasma **polymerized** layers

INVENTOR(S): Suzuki, Takanori; Kuroasaki, Masaari

PATENT ASSIGNEE(S): Tomoegawa Paper Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

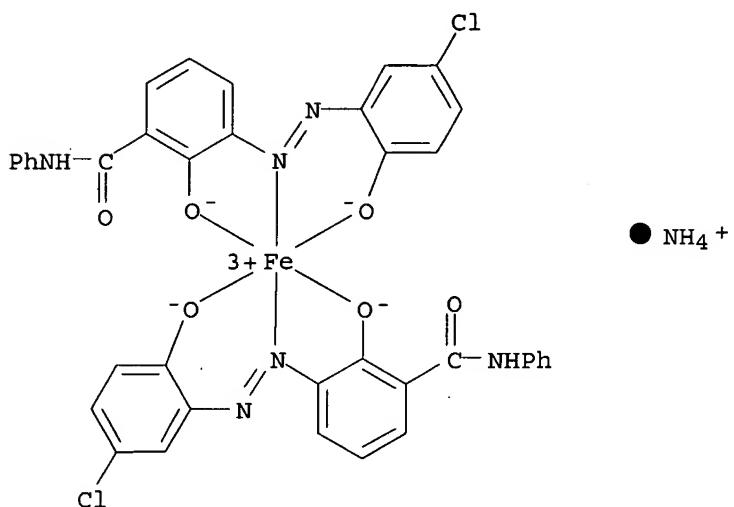
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07194968	A2	19950801	JP 1994-13196	19940110
JP 3462552	B2	20031105		
PRIORITY APPLN. INFO.:			JP 1994-13196	19940110

ED Entered STN: 21 Oct 1995  
 AB The title process, useful for modifying toners or carriers for static copying, powdered magnet, etc., consists of polymerizing, polymerizable monomers (e.g., hexamethyldisiloxane) on the surface of floating and vibrating particles (e.g., of 100:7:4:2 blend of Bu acrylate-styrene copolymer, MA-100, Viscol 660P, and T-77) by exposing to plasma.  
 IT 156108-08-6, Aizen Spilon Black T-77  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (particles containing; modification of particle surfaces by plasma polymerized layers)  
 RN 156108-08-6 HCPLUS  
 CN Ferrate(1-), bis[3-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-2-(hydroxy- $\kappa$ O)-N-phenylbenzamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)



L84 ANSWER 27 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1994:511630 HCPLUS  
 DOCUMENT NUMBER: 121:111630  
 TITLE: Scale preventive coatings in polymerization reactors  
 INVENTOR(S): Shimizu, Toshihide; Shigemitsu, Minoru  
 PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan  
 SOURCE: U.S., 8 pp. Cont.-in-part of U.S. Ser. No. 780,281, abandoned.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 3  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5302639	A	19940412	US 1992-963511	19921020
CA 2050880	AA	19920308	CA 1991-2050880	19910906
PRIORITY APPLN. INFO.:			JP 1990-284559	A 19901023
			US 1991-780281	B2 19911022
			JP 1990-238530	A 19900907

JP 1990-238531 A 19900907

ED Entered STN: 03 Sep 1994

AB A **polymer** scale preventive agent for use in **polymerization** of a monomer having an ethylenic double bond, comprises solvent composition of (A) a N-containing organic compound having at least 5 continuous conjugated  $\pi$  bonds,

(B) and anionic organic compound having  $\geq 1$  group selected from sulfonic acid group and carboxylic group and having at least 5 continuous conjugated  $\pi$  bonds, and (C) a vinylpyrrolidone-based **polymer**. Deposition of **polymer** scale can be effectively prevented not only in the liquid phase area but also in the vicinity of the interface between the gas and liquid phases. PVC having very few fish eyes was formed after 10 runs using a reactor whose walls were coated with a 60/30/10 composition of Sudan Black B, C.I. Acid Black 2, and poly(vinylpyrrolidone) (mol. weight 40,000).

IT 12392-64-2, C.I. Acid Blue 161

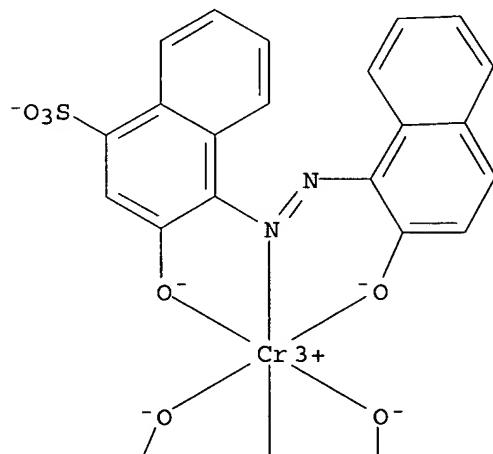
RL: USES (Uses)

(coatings containing, as scale inhibitors in vinyl **polymerization**)

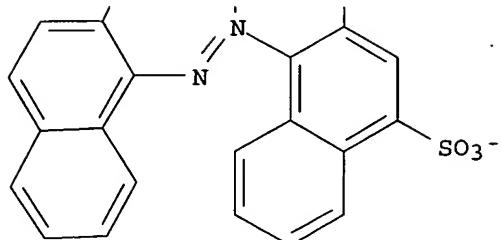
RN 12392-64-2 HCPLUS

CN Chromate(3-), bis[3-hydroxy-4-[(2-hydroxy-1-naphthalenyl)azo]-1-naphthalenesulfonato(3-)]-, disodium hydrogen (9CI) (CA INDEX NAME)

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● H<sup>+</sup>● 2 Na<sup>+</sup>

L84 ANSWER 28 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1995:294790 HCPLUS

DOCUMENT NUMBER: 122:201180

TITLE: Electrophotographic toner and its manufacture by suspension-polymerization

INVENTOR(S): Saito, Jun; Watanabe, Makoto; Kikuchi, Hiromitsu

PATENT ASSIGNEE(S): Nippon Zeon Co, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06282108	A2	19941007	JP 1993-71923	19930330
PRIORITY APPLN. INFO.:			JP 1993-71923	19930330
OTHER SOURCE(S):	MARPAT	122:201180		

ED Entered STN: 14 Jan 1995

AB Manufacture of toners involves dispersing of metal complexes I (X<sub>1-2</sub> = H, lower alkyl, lower alkoxy, NO<sub>2</sub>, halo; m, m<sub>1</sub>, n, n<sub>1</sub> = 1-3; R<sub>1-2</sub> = H, C<sub>1-12</sub> alkyl, alkenyl, sulfonamido, mesyl, SO<sub>3</sub>H, carboxy ester, OH, C<sub>1-12</sub> alkoxy, NHAc, NHBz, halo; R<sub>3-4</sub> = H, NO<sub>2</sub>; A = H, Na, K, NH<sub>4</sub>) and a colorant in a vinyl monomer, followed by suspension-polymerization in an aqueous dispersing medium in the presence of Ca<sup>2+</sup>. The toners show quick charging response, uniform charge distribution, and suppressed saturated charged level, and provide fine images without reduction of image d., staining in background, and ghost formation in repeated use.

IT 125304-21-4 161566-08-1

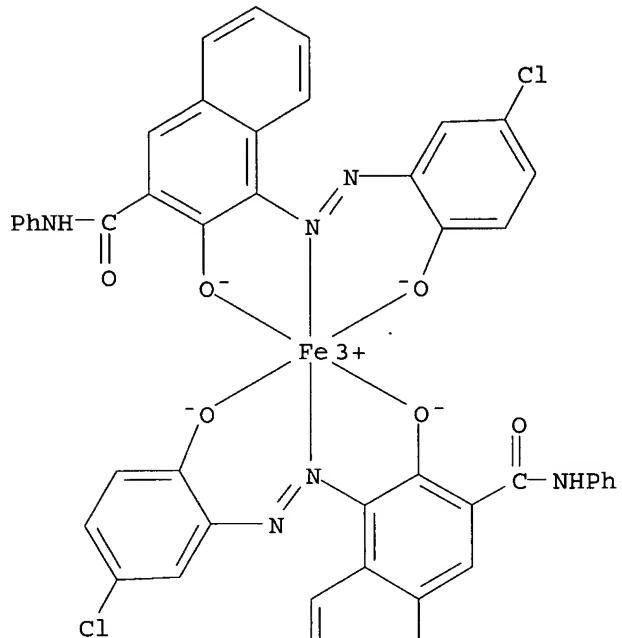
RL: TEM (Technical or engineered material use); USES (Uses)  
 (charge-controlling agent; electrophotog. toners from suspension-polymerization of dispersion containing metal complex agent and colorant in vinyl monomers in presence of Ca)

RN 125304-21-4 HCPLUS

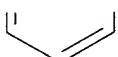
CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-3-

(hydroxy- $\kappa$ O) -N-phenyl-2-naphthalenecarboxamidato(2-) ]-, sodium (9CI)  
 (CA INDEX NAME)

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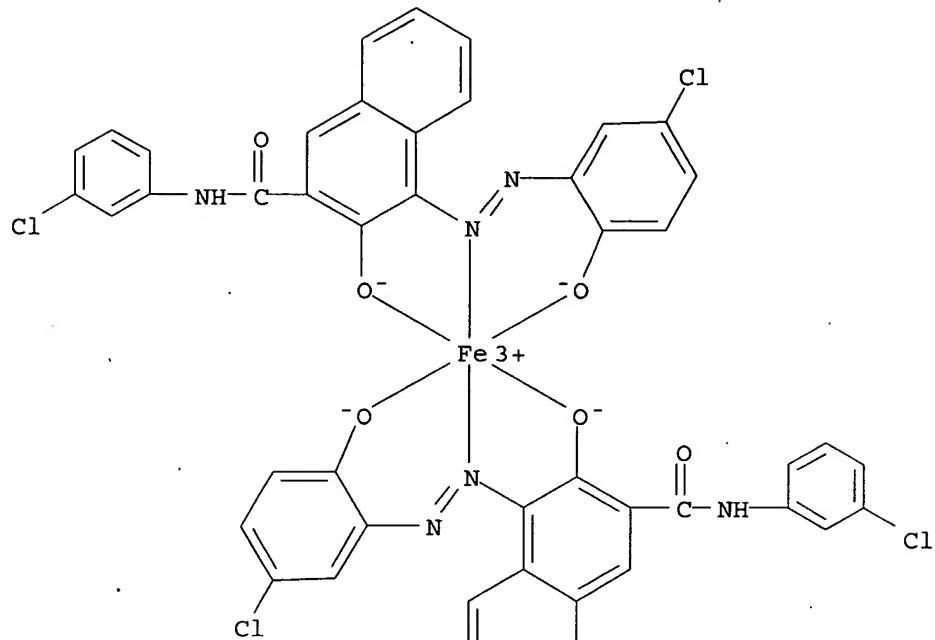
PAGE 2-A



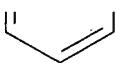
●  $\text{Na}^+$

RN 161566-08-1 HCAPLUS  
 CN Ferrate(1-), bis[4-[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-N-(3-chlorophenyl)-3-(hydroxy- $\kappa$ O)-2-naphthalenecarboxamidato(2-) ]-, sodium (9CI) (CA INDEX NAME)

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●  $\text{Na}^+$ 

L84 ANSWER 29 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1994:689621 HCPLUS

DOCUMENT NUMBER: 121:289621

TITLE: Manufacture of toners for developing electrostatic latent image

INVENTOR(S): Nagami, Harusuke; Uchino, Mitsuhiro; Nagase, Takayuki

PATENT ASSIGNEE(S): Bando Chemical Ind, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06161156	A2	19940607	JP 1992-310524	19921119
PRIORITY APPLN. INFO.:			JP 1992-310524	19921119

ED Entered STN: 10 Dec 1994

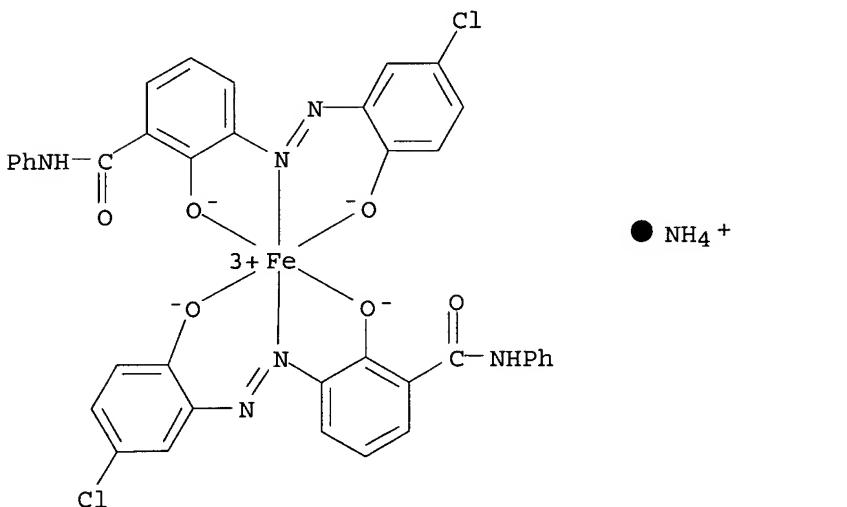
AB The title toners are manufactured by suspension **polymerization** of monomers in which neg. and pos. charge-controlling agents are dispersed, in the presence of a dispersion stabilizer in an aqueous medium. The undesirable emulsion **polymerization** of the monomers is prevented, and the toners with small particle size and controllable and adequate charge are obtained by this method. Thus, a composition containing Spilon Black TRH (neg. charge-controlling agent), Bontron N-07 (pos. charge-controlling agent), styrene, 2-ethylhexyl acrylate, divinylbenzene, C black, and a wax was **suspension-polymerized** in an aqueous medium containing Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub> to give a toner, which was mixed with SiO<sub>2</sub> and a carrier to give a developer.

IT 156108-08-6, Aizen Spilon Black T 77

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
(charge-controlling agent, in suspension **polymerization**, in manufacture of electrophotog. toners)

RN 156108-08-6 HCPLUS

CN Ferrate(1-), bis[3-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-2-(hydroxy- $\kappa$ O)-N-phenylbenzamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)



L84 ANSWER 30 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1994:165260 HCPLUS

DOCUMENT NUMBER: 120:165260

TITLE: **Polymerization** apparatus for ethylenic double bond-containing monomers and their **polymerization**

INVENTOR(S): Amano, Tadashi; Shigemitsu, Minoru; Oonishi, Hideji

PATENT ASSIGNEE(S): Shinetsu Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

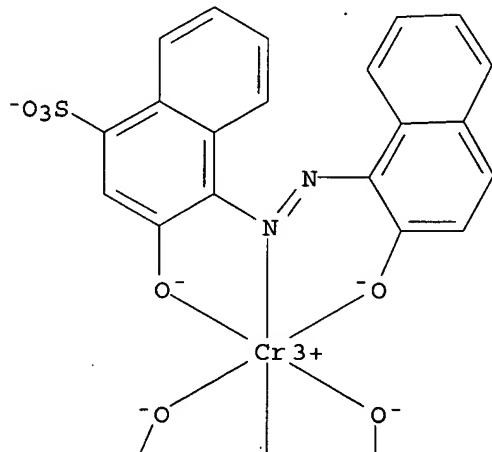
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

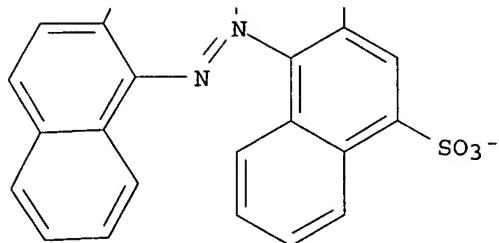
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 05239108	A2 19930917	JP 1992-78500	19920228
PRIORITY APPLN. INFO.:		JP 1992-78500	19920228
ED Entered STN: 02 Apr 1994			
AB	The monomers are polymerized by using apps. equipped with circulating lines comprising circulating pipes from reactors to heat exchangers, in which pipes are coated inside with (A) N-containing organic compds. with $\geq 5$ continuously connecting conjugated $\pi$ bonds (X), (B) anionic organic compds. with X and SO <sub>3</sub> H and/or COOH, and (C) vinylpyrrolidone-based polymers for scale prevention. Thus, a stainless steel apparatus was coated inside with Sudan Black B, Acid Black 2, and poly(vinylpyrrolidone), and vinyl chloride was polymerized in the apparatus. Then, no scale was deposited on the apparatus		
IT 12392-64-2, Acid Blue 161			
RL: USES (Uses)	(coatings, containing nitrogen-containing organic compds. and polyvinylpyrrolidone and, on polymerization reactors, for scale prevention)		
RN 12392-64-2 HCPLUS			
CN Chromate(3-), bis[3-hydroxy-4-[(2-hydroxy-1-naphthalenyl)azo]-1-naphthalenesulfonato(3-)]-, disodium hydrogen (9CI) (CA INDEX NAME)			

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● H<sup>+</sup>● 2 Na<sup>+</sup>

L84 ANSWER 31 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1994:55308 HCPLUS

DOCUMENT NUMBER: 120:55308

TITLE: Preparation of polymer particles with narrow particle size distribution by suspension polymerization

INVENTOR(S): Kamyama, Masafumi; Maeda, Masahiro

PATENT ASSIGNEE(S): Tomoegawa Paper Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05140204	A2	19930608	JP 1991-332729	19911122
PRIORITY APPLN. INFO.:			JP 1991-332729	19911122

ED Entered STN: 05 Feb 1994

AB The title particles are prepared by forming monomer liquid drops with desired size in an aqueous dispersion containing monomers, water-insol. inorg. particles,

and organic polymerization inhibitors (e.g. azo dye-metal complexes), then polymerizing them. Thus, feeding 4000 g of an aqueous solution containing Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>, Na<sub>2</sub>SO<sub>4</sub>, Na dodecylbenzenesulfonate and 0.1% I (n = 1, 2), and 1000 g of a dispersion containing styrene 4000, Bu acrylate 1000, AIBN 15, and carbon black 400 g, into a pelletizing apparatus, stirring at 10,000 rpm for 20 min, and heating at 80° and 200 rpm for 8 h gave particles with average particle size 3.73-7.46 µm.

IT 103637-92-9 131768-61-1 152223-65-9

RL: USES (Uses)

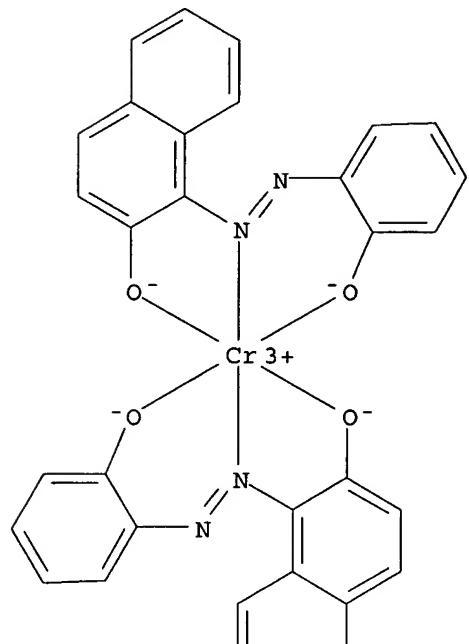
(inhibitors, in suspension copolymer. of styrene, for prevention of small emulsion particle formation in)

RN 103637-92-9 HCPLUS

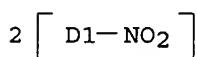
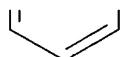
CN Chromate(1-), bis[1-[(2-hydroxynitrophenyl)azo]-2-naphthalenolato(2-)]-,

hydrogen (9CI) (CA INDEX NAME)

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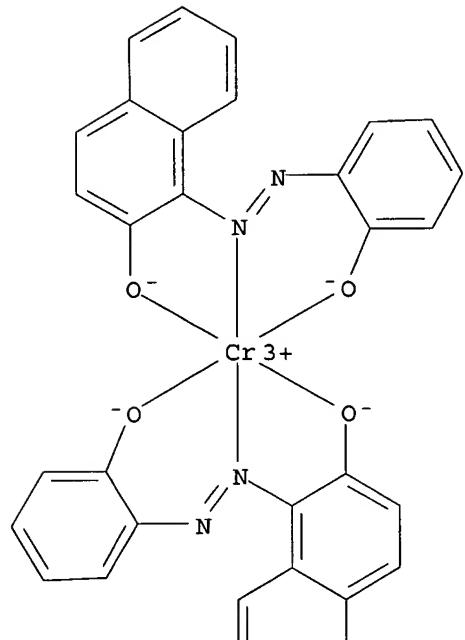


PAGE 2-A

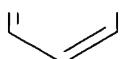


RN 131768-61-1 HCPLUS  
 CN Chromate(1-), bis[1-[{chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-2-naphthalenolato(2-)- $\kappa$ O]-, hydrogen (9CI) (CA INDEX NAME)

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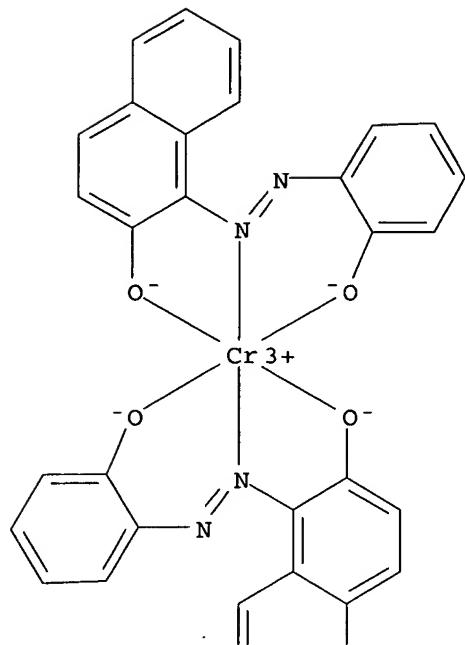
2 ( D1-C1 )

● H<sup>+</sup>

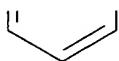
RN 152223-65-9 HCPLUS

CN Chromate(1-), bis[1-[ (dichloro-2-hydroxyphenyl)azo]-2-naphthalenolato(2-)]-, hydrogen (9CI) (CA INDEX NAME)

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4 ( D1-Cl )

● H<sup>+</sup>

L84 ANSWER 32 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1993:540034 HCPLUS  
 DOCUMENT NUMBER: 119:140034  
 TITLE: Suspension polymerization for  
 polymer particles with narrow particle size  
 distribution and without ≤1 μm fine  
 particles

INVENTOR(S): Kamyama, Masafumi; Maeda, Masahiro  
 PATENT ASSIGNEE(S): Tomoegawa Paper Co Ltd, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF

DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05093005	A2	19930416	JP 1991-280368	19911002
PRIORITY APPLN. INFO.:			JP 1991-280368	19911002

ED Entered STN: 02 Oct 1993

AB Title particles are prepared by keeping a dispersion phase containing **polymerizable** monomers and a continuous phase containing monoazo dye metal complexes I [A, A' = (non)substituted phenylene; B, B' = (non)substituted naphthyl; M = metal; R1-4 = O, NH, O-O] in sep. tanks, supplying both phases  $\geq 1$  times to a granulator with controlled ratio through sep. paths to obtain a suspension having **polymerizable** droplets with desired size, and completing the **polymerization** in a **polymerization** tank. Thus, a continuous phase [containing styrene 4000, Bu acrylate 1000, 2,2'-azobisisobutyronitrile 15, and MA 100 (carbon black) 400 g] and a dispersion phase [aqueous solution containing

10% Ca3(PO4)2-dispersed H2O 50, NaSO4 3, Na dodecylbenzenesulfonate 0.01, and II (mixture of n = 1, 2) 0.1%] were supplied to a granulator at a flow rate of 40 mL/min and 100 mL/min resp., granulator operated at 10,000 rpm, the suspension delivered to a **polymerization** tank, and treated for 8 h to give **polymer** particles showing narrow particle size distribution (1.69-22.39  $\mu\text{m}$ ).

IT 38832-99-4D, chloro derivs. 103637-92-9

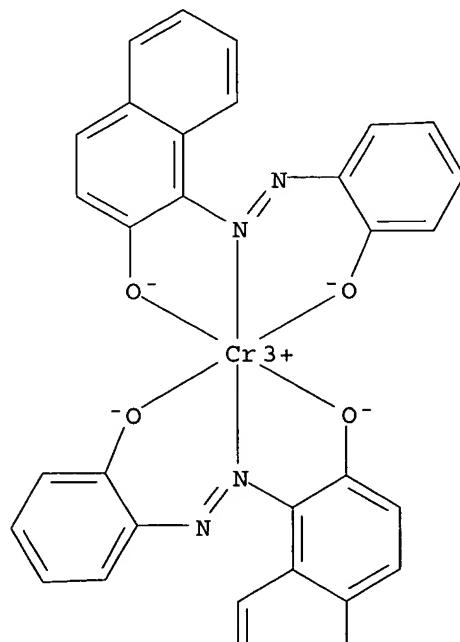
RL: USES (Uses)

(preparation of **polymer** particles in presence of, for narrow distribution)

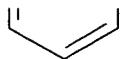
RN 38832-99-4 HCPLUS

CN Chromate(1-), bis[1-[(2-hydroxyphenyl)azo]-2-naphthalenolato(2-)]-, hydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



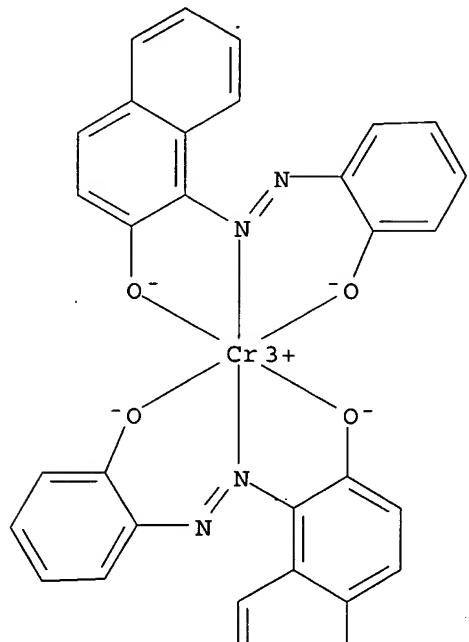
PAGE 2-A

● H<sup>+</sup>

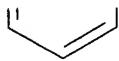
RN 103637-92-9 HCAPLUS

CN Chromate(1-), bis[1-[(2-hydroxynitrophenyl)azo]-2-naphthalenolato(2-)]-,  
hydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

● H<sup>+</sup>

L84 ANSWER 33 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1994:284929 HCAPLUS  
 DOCUMENT NUMBER: 120:284929  
 TITLE: Suspension polymerization method and toner  
       for electrophotography obtained therewith  
 INVENTOR(S): Kamiyama, Masafumi; Maeda, Masahiro; Totsuka, Hiroki;  
               Sano, Akihiro; Matsushita, Toshiya  
 PATENT ASSIGNEE(S): Tomoegawa Paper Co., Ltd., Japan  
 SOURCE: Eur. Pat. Appl., 24 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 561574	A1	19930922	EP 1993-301918	19930312
EP 561574	B1	19970514		
R: DE, FR, GB				
JP 06128304	A2	19940510	JP 1992-91566	19920318
JP 3248747	B2	20020121		
JP 06128305	A2	19940510	JP 1992-91567	19920318
JP 06128306	A2	19940510	JP 1992-91570	19920318
JP 06157619	A2	19940607	JP 1992-91568	19920318
JP 3248748	B2	20020121		
JP 06184209	A2	19940705	JP 1992-91565	19920318
JP 06256406	A2	19940913	JP 1992-91569	19920318
US 5346798	A	19940913	US 1993-30652	19930312
PRIORITY APPLN. INFO.:				
			JP 1992-91565	A 19920318
			JP 1992-91566	A 19920318
			JP 1992-91567	A 19920318
			JP 1992-91568	A 19920318
			JP 1992-91569	A 19920318
			JP 1992-91570	A 19920318

OTHER SOURCE(S): MARPAT 120:284929

ED Entered STN: 28 May 1994

AB The present invention provides a suspension polymerization method which provides polymerized particles exhibiting excellent charging particles and a toner composed of the polymerized particles obtained with the method. The method includes the steps of: placing a continuous phase component of an aqueous medium in a continuous phase vessel and placing a dispersed phase component composed of a monomer composition and at least one

solid compound having a specific structure in a dispersed vessel; continuously and simultaneously supplying each of the dispersed phase component and the continuous phase component to an apparatus for providing a shear force; exerting a shear force on the dispersed phase component and the continuous component to form a suspension material including polymerizable liquid drops of a desired size; leading the suspension material to a polymerization vessel; subjecting the suspension material in the polymerization vessel to a polymerization reaction to form a polymerized material; and drying the polymerized material to obtain polymerized particles.

IT

154791-23-8P

RL: PREP (Preparation)

(electrophotog. toners containing polymer binders and, preparation of,  
by suspension polymerization)

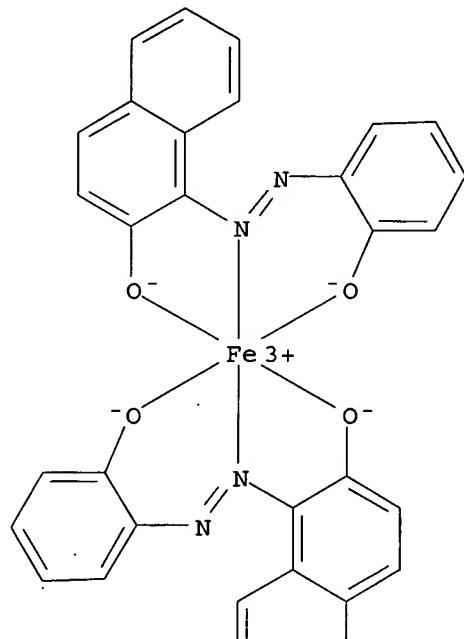
RN

154791-23-8 HCPLUS

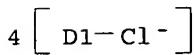
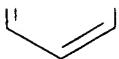
CN

Ferrate(1-), [1-[(dichloro-2-hydroxyphenyl)azo]-2-naphthalenolato(2-)]-,  
hydrogen (9CI) (CA INDEX NAME)

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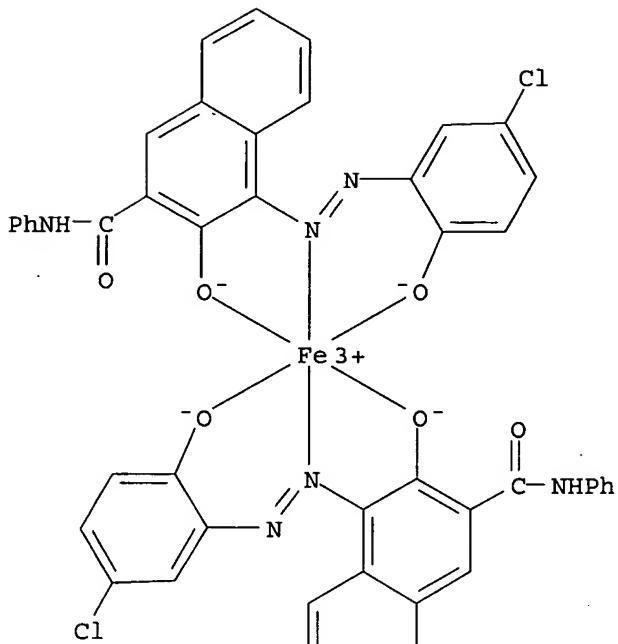
PAGE 2-A



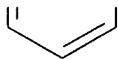
L84 ANSWER 34 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1993:482832 HCAPLUS  
 DOCUMENT NUMBER: 119:82832  
 TITLE: Dry electrophotographic toner using metal-containing azo dyes  
 INVENTOR(S): Fushimi, Hiroyuki  
 PATENT ASSIGNEE(S): Ricoh Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04308858	A2	19921030	JP 1991-138529	19910405
PRIORITY APPLN. INFO.:			JP 1991-138529	19910405
OTHER SOURCE(S):	MARPAT 119:82832			
ED	Entered STN: 21 Aug 1993			
AB	A dry electrophotog. toner comprises polymer particles of uniform grain size which are prepared in a hydrophilic organic solvent by dispersion-crystallization polymerization using a polymer dispersant soluble in the hydrophilic organic solvent, wherein metal-containing azo dyes			
(I; M	$= Cr, Fe; X = H, NO_2; Y = NO_2, Cl; A = H, NH_4$ , (II; X, Y = H, Cl, NO <sub>2</sub> ; A = H, Na, NH <sub>4</sub> ), and (III; X, Y = H, NO <sub>2</sub> ; A = H, Na, K, NH <sub>4</sub> ) are dyed or absorbed in the polymer grains in an hydrophilic organic solvent. Preferably the polymer grains are further subjected to mech. impact to adhere the absorbed metal-containing dyes to the surface of the polymer grains. The metal-containing azo dyes serve as neg. charge controlling agents and the electrophotog. toner provides high image quality and high resolution			
IT	104815-18-1			
RL:	USES (Uses)	(charge-controlling agent, polymer particles containing, electrophotog. toner using)		
RN	104815-18-1	HCAPLUS		
CN	Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy- $\kappa$ O)phenyl]azo- $\kappa$ N1]-3-(hydroxy- $\kappa$ O)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)			

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L84 ANSWER 35 OF 105 HCPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1993:214882 HCPLUS  
 DOCUMENT NUMBER: 118:214882  
 TITLE: Polymerizable metal-complexed azo and azomethine dyes and their polymers  
 INVENTOR(S): Smith, Terrance P.; Macomber, David W.; Elmasry, Mohammed A.  
 PATENT ASSIGNEE(S): Minnesota Mining and Manufacturing Co., USA  
 SOURCE: Eur. Pat. Appl., 19 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 503780	A1	19920916	EP 1992-301380	19920219
EP 503780	B1	19970108		

R: BE, CH, DE, FR, GB, IT, LI

US 5166326	A	19921124	US 1991-667658	19910311
CA 2061356	AA	19920912	CA 1992-2061356	19920217
JP 04345668	A2	19921201	JP 1992-37545	19920225
JP 08032835	B4	19960329		
KR 197318	B1	19990615	KR 1992-3939	19920310
			US 1991-667658	A 19910311

## PRIORITY APPLN. INFO.:

OTHER SOURCE(S): MARPAT 118:214882

ED Entered STN: 29 May 1993

AB The dyes, which consist of a transition metal with coordination number  $\geq 4$  bonded to a chromophoric azo or azomethine group and sep. to a polymerizable N- or P-containing group, are capable of being mordanted by polymerization. Thus, 2,2'-dihydroxyazobenzene, NiCl<sub>2</sub>.6H<sub>2</sub>O, and NaOEt were stirred 3 h in EtOH and treated with 4-vinylpyridine to give a polymerizable azo dye (I) with  $\lambda_{\text{max}}$  508 nm in acetone. Polymerization of 1.0 g I with 5.0 g Me methacrylate gave a polymer of mol. weight 17,000 with the same  $\lambda_{\text{max}}$  maximum.

IT 147044-73-3P 147044-75-5P 147044-77-7P  
147469-43-0PRL: IMF (Industrial manufacture); PREP (Preparation)  
(preparation of colored)

RN 147044-73-3 HCAPLUS

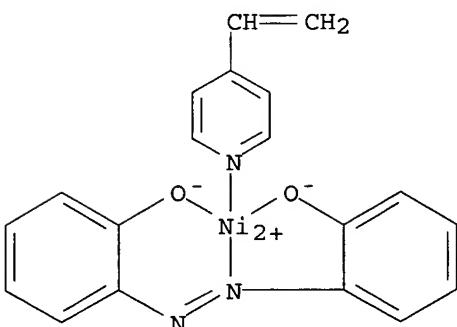
CN Nickel, [[2,2'-azobis[phenolato]](2-)N,O,O'](4-ethenylpyridine)-, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 147044-72-2

CMF C19 H15 N3 Ni O2

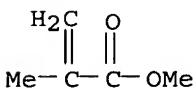
CCI CCS



CM 2

CRN 80-62-6

CMF C5 H8 O2



RN 147044-75-5 HCAPLUS

CN Nickel, (4-ethenylpyridine) [1-[(2-hydroxyphenyl)azo]-2-naphthalenolato(2-